The Builder.

VOL. XC.—No. 3287. FEBRUARY 3, 1906.

ILLUSTRATIONS.

Sedilia, Siena Cathedral.....Drawn by Mr. Lionel U. Grace.
Working Men's College, Camden Town.....Mr. W. D. Caröe, F.R.I.B.A., Architect.
The Grammar School, Lincoln.....Mr. Leonard Stokes, F.R.I.B.A., Architect.
School and Houses at Brisbane, Australia.....Messrs. Hall & Dods, Architects.

Illustration in Text.

The Grammar School, Lincoln. Plans ..... Page 120

CONTENTS.

	PAGE
The Cyprus Museum of Prehistoric and Ancient Pottery	107
A Wide Outlook	108
Notes	109
Letter from Paris	111
Notes on New Buildings in London.—VI.	111
Points for the Consideration of Municipal Councils	112
The Phenè Spiers Testimonial	113
A Pageant at Warwick Castle	113
The Surveyors' Institution	113
The Architectural Association Spring Visits	114
The London County Council	115
Applications under the 1894 London Building Act	117
Architectural Societies	117
Engineering Societies	118
Westminster City Council	118
Correspondence:—	
Appointment of District Surveyors	118
Books—S. Perks's "Residential Flats of All Classes"; A. A. Hudson's "The Law of Compensation, with Appendices of Forms, Rules, and Orders, etc."; E. A. Armstrong's "Axel Herman Haig and His Work"; "The Writers' and Artists' Year Book: 1906"; B. Fletcher's "Dilapidations: a Text-book in Tabulated Form"	118
Fifty Years Ago	119
Illustrations:—	
Sedilia, Siena Cathedral	119
Working Men's College, Camden Town	120
Grammar School, Lincoln	120
School and Houses, Brisbane	121
Competition	121
Books Received	121
Trade Catalogues	121
The Student's Column	121
Obituary	123
General Building News	123
Appointments	124
Foreign	124
Miscellaneous	125
Legal:—	
Action by an Architect	126
Action by a Quantity Surveyor	126
Damage to Property by Flooding	127
Patents	127
Some Recent Sales	128
Meetings	128
Prices Current	128
List of Contracts, etc.	130
Tenders	131

The Cyprus Museum of Prehistoric and Ancient Pottery.

IF recent years a great deal of popular interest in the study of the primeval world has been encouraged by discoveries in various parts of the world, in fact, wherever the surface soil or the mountain caves have preserved the traces of the first men. Amongst other famous early sites of human origin Cyprus must always be of paramount interest to the student, but Cyprus also exhibits the curious fact that in matters archæological there is a tide of what may be called a certain popularity, which spreads over certain provinces—a tide which has its ebb. For a quarter of a century Cyprus was a quite extraordinary field of research; it was perhaps one of the first portions of the Levant to be studied to some extent scientifically. But the earlier efforts at exploration were most disastrous. Its ancient tombs were dug up by contract at so much a hundred, and its temple sites, after being the battle-grounds for consular agents and Turkish pashas, were sifted over by women and children under the supervision of Turkish zaptiehs. The brothers Di Cesnola regarded the speculations they entered into more with the idea of making their fortunes in the antiquity trade than with any scientific purpose in view—they were mere "treasure-seekers."

The scientific exploration of Cyprus dates from after the English occupation of the island. The British and Berlin Museums employed certain archæological students to excavate tombs and the sites of Salamis, Poli, and Páphos, during the seventies and eighties; but since 1897 no one has visited the island on exploration or excavation bent, and, indeed, it is about fifteen years since any important remains have been exhumed. In 1889 the last, and perhaps the most important monument of extreme antiquity in the form of the Royal Tombs of Tamassos (Politico) was discovered under the auspices of the Berlin Museum. About the same time the British Museum cleared some part of the site of Salamis from its sand-drifts.

Very few archæological districts have ever been exploited by the "digger" in the same manner or on the same scale as Cyprus. Di Cesnola claimed to have turned out the contents of more than 2,000 tombs of different sizes near Larnaca, and about 1,500 tombs at Dali. Then after the passing of Cyprus into the English control came vast excavations of burial places all over the island by the British Museum (Sir C. Newton and many others), South Kensington Museum (Hake), and the Berlin Museum (Richter). In the early nineties 312 tombs were dug up near Limassol, 300 at Amathus, and smaller collections elsewhere by the British Museum. We may perhaps imagine without fear of much exaggeration that during the quarter of a century succeeding the period of Di Cesnola's early ventures more than 10,000 graves of a remote antiquity were rifled of their contents—and these contents now go to form the treasures of prehistoric museums all over Europe and America.

During the quarter of a century above referred to much excavation of an illicit or surreptitious character has gone on, because certain more or less inoperative old Turkish laws and customs have tended to check the open exercise of this comparatively modern system of treasure-seeking. The quantity of pottery which has been exhumed since the natives of Cyprus overcame a somewhat natural prejudice against disturbing dead bodies, which they could not be expected to distinguish from those of their actual ancestors, must have been enormous. This remarkable ware, with its concentric ring decoration and bands of chessboard ornament suggestive of some comparatively modern savages, is to be found in all the archæological collections of the world. It has been carried across the Atlantic by tons weight; the museums of France and Italy are full of it; and, considering how it is piled up in the remarkable museums at Constantinople, there is very little doubt of its having found its way into Russian and German archæological circles through the Bosphorus. It is commonly reported that much of the ware, together with other Cyprus antiquities of greater intrinsic value, has been exported within barrels of Cyprus wine and brandy to European ports by the little Greek polaccas and feluccas of the Levant.

Although so much of this pottery has been exported from the island, immense quantities of it still remain, heaped up in disused prison-yards, quarantine sheds, and other places where Government lumber tends to accumulate. There is also the nominal museum in the Victoria-road, Nicosia, which is almost entirely composed of the "thirds" left behind by successive excavators who, according to Turkish law, are obliged to divide their "finds" into three portions, one to belong to the finder, one to the owner of the land, and one to the Ottoman Government. This remarkable system, dating probably from the times when the Turks were made aware of the value of "antikas" by the removal of the Elgin marbles to London, is certainly the best method for obstructing scientific archæology ever invented by human ingenuity. As a consequence the contents of tombs, which lose all their historical interest by being scattered, are divided in such a way that part may be in New York, part in Constantinople, and part left for sale by some Greek priest in Cyprus. The destruction of the temple enclosure groups in this way has, of course, been especially deplorable. Some of these temple groups, if they had been preserved in the style of the modern excavations of Pompeii, would have been amongst the most curious remains in the world. We should have been able to appreciate with realism the appearance of a temple with its furniture of so long ago as the Bronze Age, or at least of an age antecedent to the Ptolemaic. Now, unfortunately, the sites have been swept of their crowds of votive figures, and an opportunity of receiving an impression of a remarkable antiquity has been for ever lost.

The market for Cypriote antiquities has very much weakened at the present day, but still a considerable amount of enthusiasm remains amongst the peasants for what must have been twenty years ago a very considerable and lucrative trade. The visitor is still viewed as a possible prospector for "antikas," and the natives point out with eagerness such places as they think will reward a search. Anxiety to be employed on digging contracts suggests, however, that the value to be discovered no longer reaches the standard of twenty years since, or the interested persons would doubtless do the work on their own account, instead of soliciting the introduction of capital in the form of wages.

Within the last few months, however, a very marked revival of local archæological interest in Cyprus has taken place. A popular law has been passed by the Legislative Council of the island (a sort of Parliament) founded to a great extent on the Italian "Uffizio Regionale" regulations. It is more especially framed with a view of arousing the dormant interest of the people in the past history and archæology of their native land. Under this law and the patronage of the English Administration several Cypriote gentlemen have been induced to form a new committee of management for the building of a museum in Nicosia, and for the suitable upkeep of the many national monuments. Towards the new museum a sum of 600*l.* has already been collected, but, of course, such a sum will go but a short way towards a suitable building, even in Cyprus, where building is still cheap. There are also the expenses of furnishing and classifying the museum. The new committee is, therefore, appealing for public subscriptions towards the fund now started.

The upkeep of the national monuments, a subject which will appeal still more perhaps to the outside world than the building of the museum, is one which calls for an immediate expenditure of money. The magnificent Gothic churches are all now used for Mohammedan purposes, and the ancient Byzantine convents, etc., are, of course, in the hands of the Orthodox Church; these two classes of buildings are, therefore, outside the pale of any antiquarian control. But the classic remains of Salamis and other sites, the prehistoric ruins of Tamassos and Larnaca, would well repay being cleansed and rendered presentable to visitors now that travellers are visiting the island in greater numbers since the formation of the new port of Famagusta, and the railway into the interior of the country.

It is perhaps considered by many people—and with some reason—that the archæological interest in Cyprus was exhausted in the eighties and nineties of the past century. At the same time, although Mr. J. L. Myer's "Catalogue" of the museum may be considered a final word on the prehistoric pottery of the island, there still remain many ancient monuments of great interest which cannot be transported along with all the best of the antiquities to New York or other places. For the purpose of preserving these often unique objects it is to be hoped that the new committee will receive abundant support. Hitherto the natives of Cyprus have not been in a position to realise the importance and evident advantages to their country which these antiquities confer. Now they are sufficiently educated in such matters to perceive that the Tombs of Tamassos or the ruins of Salamis, if properly cared for and exhibited to the public, may become as attractive to tourists as Baalbek or the monuments of Egypt.

The few English residents in Cyprus cannot be expected to show very much interest in archæology. They are merely government officials who have certainly not been attracted to the island by any particular affinity for such studies. The Cypriots must, therefore, rely upon themselves and their friends amongst the antiquaries of Europe or America for the funds necessary to enable the Committee of the Cyprus Museum to carry out its mission and achieve a real success.

A COMPENSATION AWARD.—Mr. Daniel Watney, a Past-President of the Surveyors' Institution, has awarded a sum of 25,416*l.* in compensation to the London and North-Western Railway Company, who claimed about 45,000*l.* in all, in respect of a compulsory sale of their parcels and booking-office near Oxford-circus, W. The premises, known as the "Green Man and Still," covered an area of 718 sq. ft. at the corner of Oxford and Argyll streets and were required by the Baker-street and Waterloo Railway Company, whose valuer, Mr. G. A. Wilkinson, estimated the amount at 20,830*l.* Mr. James Boyton, President of the Auctioneers' Institute, Mr. Leslie R. Vigers, and Mr. A. R. Stenning, F.R.I.B.A., gave expert evidence on behalf of the defendants; the claimants' experts were Mr. J. H. Townsend Green, Mr. W. H. Elwell, and Mr. B. T'Anson Breach, Fellows of the Surveyors' Institution.

A WIDE OUTLOOK.

BY PAUL WATERHOUSE, F.R.I.B.A.

I THINK it sometimes happens to those who are engaged in daily contact with the realities of building craft that, labouring in a restricted field of expression, they practically come to ignore the existence of other fields. Indeed, now that I have put this down in black-and-white it reads as a *banal* truism; but perhaps, after all, it is a fact in human dynamics which is worth restating, if only for the reason that these platitudes sometimes cover truths so obvious as to be practically unnoticed.

It is not merely inertia that prevents a productive architect from taking stock of styles or manners other than those in which he finds his own expression. I do not mean to imply that any architect worthy of the name is incapable of self-realisation except in one manner. The necessities of his duty compel every conscientious architectural worker to exhibit an ability, if not a facility, in more methods than one. But if evidence were wanted of the fact that the nimblest faculty of pure expression can co-exist with a certain almost noble indifference to the idiom of alien methods (methods alien to the brain of the particular artist), we have only to think of some great names among those who have achieved high deeds in architecture during the past fifty years. To look further back would be to enter the period in which blind partisanship and limitation was a matter not of choice only but of conscience.

In truth the architect who strives for purity of expression must often feel of his particular sphere of manifestation what Patmore felt of woman; that it (or she) is

> "A foreign land
> Of which, though there he settle young,
> A man can ne'er quite understand
> The customs, politics, and tongue."

Not, indeed, that he is for ever fumbling with an inability to turn thought into idiomatic bricks and mortar—there never was an age so quick in expression as ours—but that he is ever realising more and more the wealth of medium that lies before him—the inexhaustible depths and intricacies of his vehicle of expression. In the same way a thoughtful writer may, one imagines, sit spell-bound before his own mother-tongue, realising that to become perfect in the use of that single language is a task so vast as to preclude any wish for flights in the speech of other lands. Such a shrinking is no sign of timidity but of a great reverence for language in general—a reverence focussed by reason of the shortness of life and the length of art on one single phase of speech.

But if he limits his expression to one tongue this enthusiast will take his reading in others, and here I have brought myself at last to my subject. Mr. Spiers' volume of collected writings * is a book of the kind that is good for those whose self-imposed limitations keep them gazing down a single avenue of architectural intelligence. Mr. Spiers is

* "Architecture East and West;" a collection of essays written at various times during the last sixteen years by R. Phené Spiers, F.S.A., F.R.I.B.A. Published for the Spiers Testimonial Committee by B. T. Batsford. London. 1905.

an architectural cosmopolitan, a true citizen of the world. Architecture is architecture to him (not archæology), whether it bleaches on Syrian sands or glows under the sunshine of Spain. What is more, he approaches his architectural studies with the warm heart of a water-colour artist, and when he leads you by the hand to Persepolis, Cairo, or Ctesiphon on the Tigris you have a pleasant sense that your companion is no mere dry-as-dust antiquarian, but one in whose eyes the laws of building are laws of beauty, one to whom a piece of architecture is in the true sense a work of art. Mr. Spiers is, in fact, an amateur, if that be the highest name that we can give to the trained appreciator.

It would, of course, be unfair and unreasonable to judge this book either as a composite whole or as an efficiently representative effort. It is, and pretends to be, nothing more than a gathering together of stray essays prepared at various dates during the more recent literary career of a well-occupied man. Yet, as I have studied its pages in moments of leisure, I have been struck not merely by the well-argued conclusions to which the individual articles severally tend, but perhaps even more by the pleasure derived from the largeness and variety of outlook which the volume in its entirety affords. That Mr. Spiers should disprove "the cherished belief that pointed architecture was brought from the East by the Crusaders," or convince his readers that the connexion between Greece and Persia was the exact reverse of the relation assumed by Fergusson, is important enough from a historical point of view, but I admit that to me the pleasure of these after-dinner perusals has come from the realisation that I was, so to speak, in a watch-tower, one window of which gave on Ecbatana, while others looked towards Vicenza, Jerusalem, and Delhi. It is well to be reminded not merely that art is long, but also that art is wide. And our great art is the longest and the widest of them all. Again, if we begin thinking, as we read, on the possible connexions which make a unity of the apparently separate elements of this widespread human activity, we can find in Mr. Spiers' essays, distinct though they be, many a suggestion as to links and chains of causation. How pregnant, for instance, are the reflections to which the study of Mahomedan art gives rise. In Mahomedan architecture you have the entrancing, astonishing spectacle of a school of building craft controlled in its unity not by clime or race (which we so often proclaim to be the governing factors of style), but purely as it seems by identity of religious purpose. That Spain, Persia, and India should exhibit outbursts of splendid (if somewhat disordered) architecture which owe their impetus and their comparative identity to a religious impulse in Arabian Asia is at least a historical fact which points urgently to the conclusion that a community of spiritual interest is a stronger element in the formation of prevailing architectural manner than any local tradition or instinct of race. Mr. Spiers, judged by this volume, takes little heed of these modern theories that look to the guild or *collegium* as the mainspring of architectural activity. Foe as he is to the theory of Byzantine origins at St. Front at Périgueux, he does not go with Rivoira the length of seeing in Ravenna nothing but indigenous art, nor does he concern himself (with Merzario and Leader Scott) in tracing the paramount influence of Masonic *Magistri* in European craft. Yet for all this I rise from the reading of his book with a renewed sense of the unwillingness of our art to be tied by the bonds of geography, or even chronology; a renewed hope that some day or other we shall discover that in the chaos of the dark ages there was at work an ordered unity of craftsmanship which was, perhaps, among a turmoil of unsettled monarchies and seething nations, the most enduring, the most unfettered of human forces.

These essays cover so wide a field that it is difficult to pick out isolated points for comment, but there are some examples and some theories that stand out with special force. The clever illustration (taken no doubt from a water-colour by the author) of the palace or mosque at Diarbekr is enough to remind us how ingrained is our appreciation of the customary proportions and use of the Classic orders, and how horrible is the result of any fantastic derangement of these academic elements. Those belted Corinthian columns, surmounted by a second order of stunted Composite breed, and separated from one another by arches which are sometimes pointed and sometimes haunched, form a nightmare to which even the Cufic inscriptions hardly give artistic respectability, though no doubt the Eastern sun and Eastern colouring would soften the shock. For some reason (perhaps Alberti's skill) the pointed arches in the classical scheme of the Tempio Malatestiano at Rimini are no outrage upon our sense; but this building at Diarbekr is like, let us say, the combination of a frock coat with knickerbockers. After all, this is only an offence against the custom of the eye, but the custom of the eye is everything in architecture.

Then there is that mosque at Ibn-Tooloon, a building about which Mr. Spiers says enough to make us wish that he had said more. As a problem in architectural causation it is astonishing, perhaps unique. Up to 877 Mahomedan architects, finding the world well supplied with second-hand materials, had used such columns and capitals as were within reach, and with them had incorporated in their buildings at least a strong *soupçon* of previous style. But the architect at Ibn-Tooloon made a stand for pure originality, as other men have done since. The other men have failed, but at Ibn-Tooloon there exists, as a contradiction to all theory, a really successful and (to judge from the photograph) a really beautiful building, every feature of which is a startling innovation on previous methods. "With the building of Ibn-Tooloon," says the writer, "a new era commenced, and henceforth the new style takes its independent position." It were well if this mosque were more truly the start of a new style as well as the abandonment of an old one, but I fear there were many buildings of the subsequent years that owed little to its example. In truth, the Mahomedan style is a very uncertain performance. Perhaps its inequalities are explained by the theory that it is good in detail (or even in whole features), but bad in composition. Certainly it is difficult to believe that the genius that could produce the "doorway of a private house" in Cairo, which Mr. Spiers gives as one of his illustrations, could also design the minaret of the mosque of the Emir Yakhor.

Mr. Spiers is often very reticent as to his own travels and personal researches. One of the most interesting buildings that he describes is the Great Mosque at Damascus, and it is only from a foot-note to an illustration that we realise that forty years ago the author sat beneath its central dome to make a water-colour sketch of the north transept: It is, or has been, a magnificent building, and the fact of its partial destruction by fire in 1893 and subsequent restoration on unduly vigorous lines renders a record of its previous condition and past history specially interesting and valuable.

Of the remaining sections of the book the most important are some interesting notes on the churches at Jerusalem, a review of Dieulafoy's investigations at Susa, a chapter on Sassanian architecture, and an essay on stalactite (or honeycomb) vaulting.

The necessity for hurried publication led, perhaps inevitably, to a good many misprints, and the compiler of the table of corrigenda has omitted to note that the heading "Saint-Front at Périgueux" is lacking on page xvii. of the list of illustrations. The heading "Jerusalem Churches" is also missing.

NOTES.

District Surveyors.

THE Report of the Finance Committee of the London County Council on the proposal to pay District Surveyors by salary is printed in full in our report of the proceedings of the last County Council meeting. We are glad to see that an amendment that the subject should be referred back to the Building Act Committee was carried, though not by a very large majority. The Council have been on the eve of initiating a change in the administration of District Surveying of which it does not appear that they have realised all the possible consequences. The Report of the Finance Committee appears to us to be conclusive against it in regard to the probability of any public saving being effected by such a measure, and the idea of saving money seems to have been at the root of the proposal. The requirements of staff and offices for the salaried surveyors have obviously been quite under-estimated. There is something to be said in favour of the payment of a fixed sum to a District Surveyor, as it relieves him from the odium of being supposed to be prowling for the discovery of infractions of building law in order to increase his fees (which is what many of the outside public wrongly imagine); but on the other hand it would render the position a less honourable and independent one, and there would be less inducement for a good class of men to take it

up. Our own opinion is, and always has been, that the County Council made a serious mistake when they decided not to appoint practising architects any longer as District Surveyors; nor have we ever heard any good reason in favour of that step. Under the old conditions, the County Council could and did secure the services, as District Surveyors, of men in a high position in the architectural profession, whose name and position commanded respect; and we have never heard it asserted that these practising architects did not carry out their District Surveying efficiently. Forbidding the District Surveyors to carry on private practice was one step towards reducing them to the position of subordinates of the Council; the substitution of salaries for fees would be the next and final step, and would certainly not tend to render the District Surveyors either more respected by the public or more efficient in carrying out their duties. If the London County Council were wise, they would make this an opportunity of returning to the old system, and appointing practising architects as District Surveyors; but we have no hope that they will do so.

Breaking-up Streets.

THE decision of the Divisional Court in the case of the Commercial Gas Company *v.* the Poplar Borough Council should be noted by those who have to take up the roads for private purposes. The Gas Company, for the purposes of laying, altering, or repairing their gas pipes, had broken up certain streets in Poplar, and the Borough Council, under sect. 114 of the Metropolis Management Act, 1855, had themselves undertaken to reinstate and make the streets up. The parts of the roads taken up were of three descriptions—in portions stone setts were placed upon concrete, in portions stone setts were placed on the earth, and in others there were no stone setts. To avoid subsidence in the road the Council made the existing concrete 3 in. thicker than it was before along the line of excavation, and where there was no concrete a course of concrete was laid along the line of excavation. The Gas Company asserted that under sect. 111 and 114 of the Metropolis Management Act they were not liable to repay the Council the cost of this extra concrete. The Court held that the Act contemplated the street not only being made as good as it was before, but being placed in a state to remain as good, and to attain this object the use of the concrete was reasonable and necessary. Sect. 82 of the Metropolis Management Amendment Act, 1862, provides that the liability to make good shall extend to those parts affected which were contiguous to the portion of the streets broken up, and this obviates fine distinctions being drawn as to the exact limits of the work necessary to be carried out.

Collapsing Strength of Tubes.

UNTIL quite recently the only extended and systematic experiments made as to the collapsing strength of tubes were those of Sir William Fairbairn instituted half a century ago at the suggestion of the Royal Society and the British Association. Therefore considerable interest attaches to the paper read by Mr. A. P. Carman, of Illinois University, before the American Physical Society, describing the results of an investigation undertaken for the purpose of testing the formula deduced by Fairbairn from his experiments, and particularly for fixing a limit on the length of tube to which that formula is applicable. From this paper it appears that the narrow limits and the inadequacy of Fairbairn's formula were soon shown. Consequently, attention was next drawn to the purely theoretical formula proposed by Mr. A. E. H. Love about 1892. Inspection of the tables and diagrams given in the paper suggest that there is a minimum length for every tube, beyond which the collapsing pressure is constant, that this minimum length is quite definite, and that for lengths less than the critical minimum length the collapsing pressures rise rapidly. Mr. Carman's experiments were made upon seamless brass tubes of small diameters, which were responsible for a certain amount of error due to inevitable differences in annealing, but arrangements are now being made for a second series of tests upon steel tubes of diameters such as are used in actual boiler construction with the object of further testing the reliability of the new formula.

The New Croton Dam, New York.

IT may be remembered that since the construction of the Croton dam was commenced, some important changes were decided upon as the result of the report by a board of experts, and were due in the first instance to recommendations made by Mr. W. R. Hill, the chief engineer, to the effect that the Embankment section of the dam at the south end, about 275 ft. in length, should be removed and replaced by an extension of the masory section of the main dam. This change was authorised by the Aqueduct Commissioners in 1902, and occasioned considerable discussion in engineering circles at that time. Mr. Charles S. Gowen, who was resident engineer in charge of the works from the beginning until their practical completion, took the opportunity of expressing his opinions on the subject in a paper read last month before the American Society of Civil Engineers. The author does not agree with the conclusions formed by the board of experts, and believes that the city of New York have been induced to waste nearly 200,000*l*., and at least two years of valuable time, in carrying out unnecessary alterations. The grounds for these opinions are fully stated in the paper, upon which there will probably be a somewhat lively discussion. American views as to what is safe and what is unsafe in engineering construction do not always accord with British views on the same subject. In this case we have no reason to doubt the wisdom of the recommendations made by the expert engineers to which this important matter was referred, and to whom every credit must be given for admitting and rectifying what we regard as a serious original error.

Emptying Cesspools.

IN the case of Wandsworth Borough Council *v.* Baines, commented upon by us in a recent issue, the liability of the Local Authorities as to the removal of house refuse was the subject of decision, and now in Stainland Provision Society, Ltd., *v.* Stainland Urban District Council a question has been decided as to the liabilities of cleansing cesspools. The local authority had given notice to the appellants, the owners and occupiers of certain premises which had been erected before the year 1890, to empty and cleanse their cesspool. This notice was given pursuant to certain by-laws made by the local authority in 1890. In the year 1894 the local authority had passed a resolution that they themselves would in future undertake "the scavenging of privies, closets and ashpits, and that dry earth closets be emptied and cleansed monthly, privies and ashpits every three months." The appellants contended that by this resolution the local authority were bound to undertake the cleansing of the cesspools by virtue of sect. 42 of the Public Health Act, 1895, but the Court held that the local authority could undertake only part of the duties specified in sect. 42, and that this was all that they had done. The by-laws as to cesspools therefore remained in force, and the appellants were bound to empty their own cesspool.

The Papal Palace, Avignon.

IN our Notes of July 18, 1896, and January 12, 1901, we commented upon the demolition of the Porte Limbert, a part of the old fortifications, and of the ancient gateway facing the modern suspension bridge across the river, which constituted salient features of the walls around Avignon—a notable relic of mediæval France. We now learn that steps are about to be taken for completing a restoration which was begun in the early years of the last century of the Popes' Palace at Avignon, and for converting the buildings for purposes of a museum of religious art. After the Revolution the palace was taken for a prison and soldiers' barracks, the great hall, wherein the groining and shafts remain, being divided into floors for dormitories. In 1309 Clement V. (Bertrand the Goth) removed his Court from Rome to Avignon, which Phillip III. had ceded to Gregory X. in 1273; Benedict XII., also known at Rome as Nicholas V., began the erection of the palace in 1336, and, by one account, his successor, Clement VI., bought the land from Joanna of Sicily for 80,000 florins. Until Gregory XI. restored the papal chair to Rome, in 1377, Avignon formed the seat of seven occupants of the papal throne. During the schism of 1378-1447 it was the seat of several of the Anti-Popes, and it continued in possession of the See until the deposition in 1798 of Pius VI. The palace, which covers more than 1¼ acres of ground, and combined the structural features of a monastery and a feudal castle, was surrounded with high walls and towers. The Tour de Trouillas in the northern block was built by the architect Pierre Obreri for Benedict XII.; it was used as a state prison and there, it is said, Rienzi was incarcerated. Giotto decorated

the lower chapel for Clement V.; the frescoes in the "Salle de l'Inquisition" are attributed to Spinello Aretino; but the greater portion of the mural paintings and decorative work have suffered irreparable injury. The grand staircase has a continuous groin; the walls of the "question-chamber" were built so as to contract above in the shape of an inverted funnel in the belief that they would prevent the passage of sound.

The Municipal Visit to Paris.

THE members of the London County Council who visit Paris next week will have an opportunity of seeing a great deal of the best that is to be seen of Paris architecture and art. On the 6th the list of places to be visited includes the Bourse, with its recent architectural additions; the Palais de Justice, one of the finest buildings of its kind in Europe, to which an eminent architect devoted for years his whole time and care; and the two palaces of art on the Champs Elysées, the smaller one of which is one of the most noteworthy and individual architectural creations of our day. On the 7th they are to see the Sèvres porcelain factory, and on the 8th the Natural History Museum, with its remarkable sculptured and pictorial decorations, the Gobelins tapestry works, the Panthéon, and the Sorbonne. The succeeding day is to be devoted to seeing schools. It seems odd that no mention is made of the Carnavalet Museum, the Municipal Museum of relics of Old Paris, the study of which might perhaps have prompted steps towards the formation of a similar museum here for relics of Old London.

LETTER FROM PARIS.

AS THE French Constitution requires that the Ministers in office should send in their resignation to the new President on the 18th, M. Dujardin-Beaumetz will have to abandon the office of Under-Secretary of State for Art, which he has occupied for a year with great distinction. It is hoped that this gentleman, who is a true artist in spirit and thoroughly acquainted with his subject, will, in virtue of his special qualifications, find a place in the new cabinet. Among the last acts carried out in the exercise of his functions, we may especially mention his reorganisation of the Conseil Supérieur des Arts Décoratifs. Occupied as he was with the development of our national collections, M. Dujardin-Beaumetz had also projected the erection of a new and much larger building for the Luxembourg Museum, in the gardens of the Seminary of St. Sulpice; and it is thanks to the impulse which he has given that the Malmaison Museum is now in great part organised. With the funds acquired by a special vote of Parliament, the Salon Dorée on the ground floor, the former bed-chamber of the Empress Josephine, the Library of Napoléon, and other rooms in the Château, have been restored to their original condition, and will be opened to the public in the course of the summer. It is to the same influence that we owe the project of the monument in the Cours-la-Reine to the memory of the great French landscape-painters.

A committee has been formed in Paris for the erection of a monument to Bouguereau by public subscription. This monument will be a testimony both of appreciation of his artistic acquirements and also of gratitude for the services which he rendered to French art and artists by his work in connexion with the professional institutions which he presided over and administered.

The Municipal Council has instituted an architectural competition for the façades of houses for the portion of the Rue Réaumur comprised between the Place de la Bourse and the Rue Palestro. The jury have awarded premiums to MM. Walwein, Montarnal, Bousson, and Heimant.

The gallery set apart at the Petit Palais for the works of Henner will shortly be opened, and in the same museum and at the same time will be opened the room containing the collection of drawings presented to the City by M. Harpignies, who has also presented to the Luxembourg a fine collection of views made by him between 1850 and 1860, principally in the Roman Campagna and in the south of France.

During its coming session the Municipal Council will be largely occupied in the consideration of various schemes of decoration, foremost among which is the completion of the decorative scheme of the Petit Palais. Externally this will consist in the addition of a number of statues, and internally there will be a division of the galleries into separate salons connected by long galleries, in order to give more hanging space for the constantly increasing collection of paintings. Large skylights are also to be formed above the different rooms in order to improve the lighting, which is not all that could be wished. The Council will also be occupied with the final arrangement and treatment of the large basin in the Place de la Nation, in the centre of which stands Dalou's group of the Triumph of the Republic. According to Dalou's idea, this group was to be accompanied by figures of fabulous animals spouting up water; and it is this scheme, for which the sculptor had left sketches, which the Council intend to carry out, giving a commission to some eminent animal sculptor, such as M. Gardet, to execute models to be carried out either in bronze or lead, in the same manner as the decorative groups in the fountains at Versailles. As in addition to this there are to be commissions for memorial busts of Cernuschi, the Duchesse de Galliera, and Paul Meurice, and statues of Theodore Roussel and Baron Taylor, it will be seen that the Municipal Council is doing its part in the encouragement of French sculpture.

The next of the series of exhibitions of applied art at the Musée Galliera will be an exhibition of silk in its various applications to art and industry, which will be open in the spring. This exhibition, which is specially to present a kind of analysis of the work of the last ten years, will include also a retrospective exhibition of XIXth century work and also of silk textiles of earlier dates.

The use to be made of the Château de Bagatelle seems to be at last decided on. The Municipal Council will authorise the holding in it of a series of historical or retrospective art exhibitions, of the same kind as that which was attempted last summer by a group of amateurs, whom the authorities made the mistake of not encouraging.

NOTES ON NEW BUILDINGS IN LONDON.—VI.

AT the corner of Bond-street and Piccadilly is a new building, fronting to both streets, which is rather typically representative of the new London architecture. Where there is anything more than mere building, nowadays, we see generally the attempt at the picturesque; at gables and skyline, and piquant varieties of detail. There is something restless and wanting repose in this, but there is at any rate a certain life and interest in it. The Bond-street front of the building in question illustrates a feature which we have observed in various other quarters to have become rather a favourite one—that of carrying a kind of angle post in stone the whole, or nearly the whole, height of the angles of a bay or other feature. Where, as is generally the case, this apparent post of stone does not start from the ground but from a bracket or corbel, and still more in some cases where it starts from no visible support at all, but its lower end finishes in the air, it is an unmasonic form of stone design; and we see instances (perhaps to be noticed hereafter more specially) where it becomes absolutely an imitation of joinery construction, and the stone angle post looks like the newel of a stair. In the building we are now considering this has been avoided so far that the bay towards Bond-street, projected over an arched opening on the ground floor, has a sufficient corbel to carry it, and the post-like angle feature resolves itself in the upper story of the bay into an angle colonnette, thus at any rate returning to a masonic form at the finish. The front towards Piccadilly, with its large gable, is effective; so also is the manner in which the projections of the two lofty bays on this front are connected by balustraded balconies flush with the outer faces of the bays. The fault of this building is the want of unity of style and scale in the details. Some are too heavy for the general style of the building; others too light. For instance, the new practice has been adopted of leaving the stone mullions and transoms of the windows with a plain square section, with no moulding. There is no beauty in this treatment of mullions, which we have come across lately in many places; its sole recommendation over a moulded mullion is its novelty, moulded mullions being apparently regarded as "played out"; but it assimilates very well with a building of plain, solid, and massive character. In the case of a building like this, treated mostly in a light and rather playful manner, the square section mullion is too heavy for its surroundings. In fact, the architect does not seem to have been sure what architectural character he was aiming at; window dressings are decorated with flimsy little floral pendants, put there from an idea that something ornamental was wanted, but which have no accordance with anything else in the design, any more than the sinuously-curved heads of the top windows of the angle bay, which do not look well. Both in the roof balustrade and in the balustrades of the balconies towards Piccadilly a form of baluster much lighter in proportion than usual has been adopted, coupled with a very massive balustrade section, which is quite out of keeping with the proportions of the balusters; this is especially noticeable in the balustrades of the balconies, where the balusters are in themselves of a graceful and pleasing design, but are quite crushed by the massive proportions of the balustrade rail over them, which they seem inadequate to support. The worst mistake in the building is, however, one which the architect probably considered to be a virtue. The ground floor at the angle is a shop, as usual nearly all glass, but the architect has endeavoured to remind us that the upper part of a building ought to stand upon something solid, by introducing very narrow thin apparent piers of masonry, just enough to hide the iron supports. It would have been far better and more architectural to have candidly shown the iron standards and treated them with paint or in some other way which would not have disguised their existence. As it is, we look at these thin stone uprights, rather than piers, which make believe to carry the building, and at once expect to see them crack to pieces. This is certainly not architectural treatment.

We have only to walk down St. James's-street to realise the contrast between what may be called the tentative picturesque and the certainty and unity of true architectural style. Here, at least, in the Alliance Buildings at the south-west angle of St. James's-street, is a piece of real architecture—solid, severe, all composed with one definite aim, and with no tricks of detail anywhere. Of course, it must be conceded that the architect has had an immense advantage here in not having a shop on the ground story, and in being able accordingly to erect his building on a solid ground story of masonry; but apart from this, the remainder of the design forcibly illustrates the power of reserve and subordination of detail in architectural design, and the effect to be obtained by simple and well-chosen treatment of masonry and mouldings, with hardly any ornament at all. The ground story is not merely solid, it is almost Cyclopean in treatment, at least on the east front facing Pall Mall, with rustication of the boldest character, and great semicircular arches of more than 2 ft. reveal. As in the building next to the Gaiety Theatre (which we may take to be essentially the production of the same designer,* whether carried out by him or

* We have purposely abstained, in these notes, from giving the names of architects, and even from inquiring them where we were not aware of them; our object being simply to consider how a building strikes the spectator, apart from any personal considerations.

not), the ground floor arches show a sublime indifference to the spacing of the openings above them, and are quite massive enough to do this: though here, as in the Gaiety building, we feel that we would rather not have seen the keystones directly quarrelling with the sills of the windows above them. The form of rustication employed (sketched here) is not one that we are fond of, and, as will be seen on the return of it round part of the south front, when it comes to vous-soirs over a comparatively small arch, it is apt to cut up into rather awkward-looking lumps. It works quite well, however, for the large arches on the east front, and is undoubtedly a very powerful form of mural expression. Above the ground story the main range of upper windows (really the second story, though on the east front it appears externally as the first story) is treated with pedimented heads and consoles, which consoles form the only exterior detail that does not seem quite satisfactory, as they strike us as somewhat too thin and light in proportion for the character of the other details; but it is a small point, and there may be two opinions on it. This range of windows is decorated with iron balconies of rich design and sufficiently massive character, designed with a fine sweep outwards from the base, falling in again to the top rail; these balcony grilles form almost the only detail on the building which can be classed as ornament; the rest is simple masonry and moulding, crowned with a plain modillion cornice. The treatment of the top-story windows, square-headed openings with a keystone carried up to the soffit of the cornice, and the wall between finished with a small moulding returned into the window-jambs, is particularly refined and well studied.

The large arched windows on the ground story form really, as already hinted, two stories of windows, at least over a part of the building, the first floor being a mezzanine floor level with the springing of the arch, and consequently having semi-circular windows starting from the floor level—not a convenient form of window internally. But externally we have a building which in dignity and coherence of architectural style is worthy of the best traditions of the Florentine Renaissance. Young architects who may have the opportunity of adding to the street architecture of London should study this building, and learn to see how much may be done by real solid building and by well-considered masonry design and moulding, without bedizening a front with what is often falsely called ornament.

POINTS FOR THE CONSIDERATION OF MUNICIPAL COUNCILS.*

THERE is a point which is of great importance in the general appearance of a town, and that is the position of public buildings. How many of our great halls and handsome buildings are hidden in out-of-the-way corners, just as so many of our great thoroughfares lead to nowhere and nothing? I do not want to seem unpatriotic in continually quoting other countries, but we cannot blind ourselves to the fact that in most Continental cities great attention has been paid to these points. Public buildings are always well placed. If you go down a great street or avenue on the Continent you are practically certain to come to an architectural feature of the town. Similarly, if you find the town hall you are equally sure of finding the main thoroughfares converge thereto. We find too often here that economy is almost the prime factor in securing a site, and cheap sites are not usually the best for such a purpose. You may, of course, save a few hundreds in purchase money, but when you are putting up a public building to cost 50,000*l.* to 100,000*l.*, and to last for generations, it is foolish to grudge even a few thousands extra if by spending you get an ample site and a commanding position—two qualifications that should be secured in the erection of all our public buildings. Cheap and nasty may exist even in the matter of sites.

One department in which municipalities could with advantage exercise control is that of advertisement hoardings, the necessity for supervision of which is glaringly instanced in every town. As a beginning they might have the power to define areas in each town where alone hoardings should be erected, and if a few private owners anxious to let their land for advertisement purposes were slightly prejudiced they must remember that in this, as in other things, the desires and interests of the community take precedence. One rule I should suggest is that under no circumstances should it be permissible to deface the gable ends or fronts of buildings with advertisements. Nor would I permit buildings that have been damaged by fire or fallen into decay to stand like ugly skeletons plastered over with posters, eyesores to all that pass and a disgrace to the town in which they exist. Power should be obtained to compel the owner to raze such buildings to the ground; better to have an unoccupied piece of land than a nightmare of a building. There is, further, the desirability of censorship over the nature or character of the posters themselves. It is really distressing to see the class of thing with which most posting stations are decorated, and the evil effect of some ultra-sensational picture has been definitely traced in more than one instance. The Continental authorities have a censorship of the kind suggested, and, indeed, they have large powers in other directions as to the size and construction of advertisement designs. We might follow the example of Continental towns and cities in their restrictions, or the lead of Chicago, where no bill-hoarding may be erected in a residential street unless by consent of three-fourths of the frontagers. Edinburgh has been the pioneer in securing for the Council as representing the community the right to say where advertisements may be placed, and probably they were roused to energetic action by the threatened disfigurement of their lovely and beloved Princes-street. At any rate, they were actuated by the desire that their beautiful city should not be injured in its attractiveness, a quality by no means profitless to the city. Of course, for really objectionable posters we may rely to some extent upon the common law and the police authorities; but, from the æsthetic point of view, we do undoubtedly need more power. Glasgow, the most go-ahead of British cities, sacrificed a solid financial advantage of 4,000*l.* a year by deciding to abolish advertisements on their tramcars.

Take, for instance, the hoarding around the monument in Liverpool to the late Queen; it got on one's nerves, and really it was up so long that we wondered if it was to remain for ever. Why should buildings be enclosed by tall, unsightly palisadings? Personally, I see no reason why a hoarding should not be made, say, 4 ft. solid from the ground, and above have spaces left between the boards, with a capping on top, no hoardings to be higher than 8 ft. to 10 ft. If the work is good, there is no necessity to hide what is going on behind.

The Manchester Improvement Committee have decided to keep free from advertisements all hoardings placed round buildings which are in progress of erection or where alterations are being made. In Leyden they go still further, the municipality managing all advertisements of the poster class. I would, before leaving this part of my paper, like to say how much one appreciates the efforts of such firms as Pears', Bovril Company, Nestlé's Milk, Vernon's, and others in their attempt—and, I think you will agree, successful attempt—to produce pleasing posters. The Brussels Municipal Art Society have gone to the extent of instituting competitions for tradesmen's signs, which were most successful, the result being that many of those who competed received orders to decorate shops with suitable signs and name-boards. Such a competition might easily be got up in Liverpool.

Perhaps the most degrading kind of advertisement known to modern towns is the sandwichman, the employment of whom is a disgrace to any civilised nation, while to take advantage of the necessities of women to put them to such an occupation needs stronger condemnation than I care to put into words. There must be something wrong somewhere when men and women turn themselves into walking sign-boards. It is at least something to the credit of the community that in London there was such an outcry against the employment of girls in this capacity that the employers were compelled to cease this degrading style of advertisement. This is what we want—so to rouse public opinion on the question generally by the actions and speeches of spirited citizens that a pride will be taken in their city and a jealousy for its fair name excited.

Still another nuisance that ought to be modified is the smoke, which so pollutes our atmosphere, and, according to the opinions of all experts and every thinking man, exercises so evil an influence on the health of a town. One result which proves the effect is the London fog, the density of which is admittedly due to the enormous quantity of smoke poured forth by the hundreds of thousands of houses which form that congeries of towns. I do not think that our municipalities exercise their full power over offenders, and, personally, I would like to see still more stringent regulations in force, for not only is it a menace to health, but also causes destruction to the plant life of a city. It is difficult to persuade some people of the injury that the smoke issuing from tall factory chimneys, which a city suffers to float over it like so many black flags, does, because they believe that smoke means industry, and industry wealth. Personally, I believe that it means defective stoking at the furnace.

Now, what do all these things lead us to? They are the approach, in my opinion, to a city wherein the inhabitants shall have beautiful things to help them in mind, and healthy conditions to maintain the vigour of the body. People desire to live in a good, clean, and beautiful town, and if you give them such surroundings you will not only benefit the inhabitants, but you will attract new residents from other places. Your houses will be well occupied, their number will increase, and, so long as the increase goes on proper lines, you will have unending possibilities of increasing the rateable value, and thus keeping your rates at a desirable level. Visitors coming into the town will covet the privilege of being residents there, and your municipality will have a good name throughout the land. Manufacturers, too, will be attracted both by the population and the conditions of life; in fact, the pleasanter you make your town the greater will be the probability of its becoming a self-contained community, possessing all the means of ministering to the needs—physical, intellectual, and moral—of those within your borders.

This is done in many Continental towns; indeed, a body of gentlemen composed of architects, artists, and engineers is recognised as a necessary part of the municipal body, and, personally, I consider it would be a very great honour to any member of this and other societies if they were asked to attend a committee and assist in formulating an improvement scheme; not that I believe officials are incapable, for I would be the first to give them every credit, but I do believe they in years get into an official groove, which it is almost impossible for them to get out of.

We hear often of architects complaining, and read continually in our journals of building surveyors designing and carrying out public buildings. I see no reason why they should not if they are able; but if the members of our profession want to put a stop to the practice, then let them make their influence as a society felt, and I believe recognition will be the result.

I fancy I can hear some say, Why read such a paper to an architectural society. It is unsuitable for an audience of professional men; it would be all right for a number of town or city councillors. We know all these things and see them every day, and agree that a remedy is needed. Quite right; I understand such a point of view, but are we architects not the proper people to awaken civic pride? Ought we not to condemn in season and out of season these flagrant eyesores? Ought we not to do all we can to educate the tastes of the people? Personally, I think we ought.

I am sorry to say that I have a grievance against the City Council of Liverpool, and it

* Part of an address by Mr. T. T. Rees, President of the Liverpool Architectural Society, delivered on Monday, January 22.

is this—that it does not recognise a Society like ours as it ought to be recognised; and, on the other hand, I am of opinion that our Society does not make its influence felt. Councillors want education as well as those outside the Council chamber. How can this be done? One way I would suggest is this, that when any paper touching upon city affairs is being given—and we ought to have two at least every year—the Councillors ought to be invited to attend our meetings. Another way is that we ought to form a committee of this and kindred societies, whose duty it is to watch what schemes are being brought forward, whether it be buildings, laying out streets or parks, and report; and we as a Society, when necessary, ought to make such recommendations to the Council as will help them to properly carry out such schemes. If this were done I believe that before long the Council would ask our President, and perhaps some of the senior members, to meet the Council committee and discuss matters relating to the city improvements.

THE PHENÈ SPIERS TESTIMONIAL.

We have received the following statement from Mr. Schultz, the hon. secretary for the Spiers Testimonial Fund, which we have pleasure in making public:—

"The executive committee of this testimonial have now wound up the matter and closed the accounts. After paying all the costs in connexion with the various items of the testimonial, it was found that there was a balance to the credit of the fund of 79*l.*, and that only 124 copies of the volume "Architecture East and West" remained unsold at Christmas, 1905. The committee have handed over the balance of 79*l.* to Mr. Spiers to deal with in any manner he thinks fit, and have instructed Mr. Batsford to transfer the remainder of the edition of the book to Mr. Spiers's account.

This settlement of the matter may be looked upon as highly satisfactory to all parties concerned. When it was decided to publish the volume, it was not anticipated that after paying the costs of publication there would be any appreciable balance to deal with. The success of the publication is largely due to the zeal and energy of Mr. Batsford, who gave a great deal of personal time and trouble to the matter, and also, of course, to the excellence of the matter in the work itself, which caused the volume to be well received and taken up.

We understand that Mr. Spiers is going to devote the sum of money which has been handed over to him to a useful architectural purpose, and we may expect from him shortly an announcement on the subject.

The statement of accounts and balance-sheet, which has been signed by Sir Aston Webb, and the other members of the executive committee, is open to inspection by any subscriber who may wish to see it, at the office of the hon. secretary and treasurer, Mr. R. Weir Schultz, 14, Gray's Inn-square, W.C."

It is rather a singular coincidence that the above statement, which only reached us on the morning of going to press, should, quite accidentally, have been sent in for publication in the same issue in which we had already arranged for the publication of Mr. Paul Waterhouse's article on "Architecture East and West," which will be found on another page.

A PAGEANT AT WARWICK CASTLE.

Mr. Louis N. Parker has prepared the libretto of a historical pageant which will be held in July at Warwick Castle, and of which he will act as "master of the ceremonies." A tableau representing the history of Warwick will form the closing scene; amongst the episodes that will be illustrated are the state visit in 1592 of Queen Elizabeth, with Robert Dudley, Earl of Leicester, on her progress to Kenilworth, the capture (at Northampton) of Henry VI. by Richard Nevil, the "king-maker," the trial and condemnation, at Blacklow Hill, of Piers Gaveston, the siege of Kenilworth Castle when held by Simon de Montfort, and the legendary slaying of the Dun Cow by the redoubtable Guy, Earl of Warwick, who, we may mention by the way, is commemorated by a bas-relief in Warwick-lane, Newgate-street, where was the London inn of the earls of that house. King Alfred's daughter, Ethelfleda, Countess of Mercia, reinstated, after its destruction by the Danes, the fort which Rous of Guy's Cliffe (*obiit* 1491) the historian of the county ascribes, with Camden and Dugdale, to the British King Cunobelin. Some writers affirm that the fortress, now represented by Warwick Castle, had been rebuilt as one of those established by Ostorius Scapula, in the later province of *Flavia Cæsariensis*, along the line of the Fosseway from Bath to Lincoln. Warremunde, father of Offa, King of Mercia, rebuilt the town, calling it Warre-wyke—a name which appears as Werhica upon a coin of Hardiknut. An area of nearly three acres is encompassed by the outer walls of the subsisting Castle, which constitutes the perhaps finest example of a feudal fortified residence in England, remarkable for the great interest of its gatehouse and system of military defence, enhanced by the beauty of its position upon a rock by the Avon. A road winding upwards from the riverside leads to the main gatehouse, flanked by two towers, and having a barbican or outer fortification. In the north angle of the enceinte stands Guy's Tower, 128 ft. high, and duodecagonal on plan, with an embattled parapet resting upon corbels, built at the close of the XIVth century by Thomas Beauchamp, Earl of Warwick, who renewed the curtain walls and some of the minor towers, and made the large vaulted substructures beneath the Castle. In the opposite angle is the earlier Cæsar's Tower, quatrefoil on complete plan, and having a machicolated parapet with an upper battlement rising above, as at Pierrefonds and Château d'Etampes, and at Craigmillar—the last-named being a rare example after that kind in Scotland. On an acclivity to the south-west was erected Ethelfleda's keep, replaced, probably in the late XIIIth century, with a shell keep of stone; on the south-east lies the range of private apartments. The great hall and the domestic apartments in the eastern wing were restored by Anthony Salvin (who had done some work there in 1863-6) after their destruction by fire in July, 1871. In a greenhouse, erected for its reception, was deposited the Bacchic vase, or bathing basin, of Lysippus, discovered in 1770 in the bed of the old lake Pantanello, near Hadrian's villa at Tivoli, and brought to England by Sir William Hamilton—confer Piranesi's "Vase e Candelabra." The present house of the Earls of Warwick and Brooke derive from William Greville, citizen of London, *temp.* Richard II., who, in 1398, purchased the manor of Milcote, co. Warwick, from Sir Walter Beauchamp; his epitaph at Campden describes him as "the flower of wool-staplers." His descendant, Fulke Greville, of Milcote and Alcester, and of Brooke House, Holborn, the learned and accomplished courtier, obtained from King James I. a grant of Warwick Castle with its dependencies, and expended large sums of money there. He was elevated Lord Brooke, Baron Brooke, of Beauchamp's Court, co. Warwick, on January 18, 1621. The stately monument which he erected for himself in the chapter-house of the formerly collegiate church of St. Mary, Warwick, bears the inscription:—

"Fulke Greville, servant to Queen Elizabeth, councellor to King James, and friend to Sir Philip Sidney. Trophæum Peccati."

William I. made Hyde de Newburgh castellan with the title of Earl of Warwick, and surrounded the town with walls and a ditch, whereof some vestiges remain, and which gave the name of Wall-dyke to a part of the town. Roger de Newburgh, second Earl, made the parish church collegiate in 1123, incorporating with it the Collegiate Church of All Saints, which then stood within the castle precincts. The fire of September 5, 1694, consumed more than one-half of the town, and the tower, nave, and transepts of St. Mary's as rebuilt in the latter half of the XIVth century by the eleventh and twelfth Earls of Warwick (Beauchamp). Sir William Wilson, of Leicester, architect and builder, rebuilt the nave, jointly, it is said, with Wren, whose drawings of the church and some sketches of proposed new works are at All Souls' College, Oxford. Mr. J. A. Chatwin restored the fabric in 1896. On January 31, 1891, we published Mr. Harold Brakspear's set of measured drawings of Richard Beauchamp's Chapel of our Lady (1443—64) on the south side of the chancel of St. Mary's; some sketches of the town and Castle will be found in our Volumes LVIII., p. 63, and LXXV., p. 129, for 1890 and 1898.

Rood Screen, St. Paul's Church, Bedford.—A new rood screen of English oak has been placed under the chancel arch of this church. The work was carried out by Messrs. Rattee & Kett, of Cambridge, from designs by Mr. G. F. Bodley, R.A., and the cost was about 650*l.*

THE SURVEYORS' INSTITUTION.

An ordinary general meeting of the Surveyors' Institution was held on Monday evening at No. 12, Great George-street, Westminster, S.W., when a paper, by Mr. Frederick Marshall, K.C., on "The Valuation of Machinery for Rating Purposes," was read.

The author said that, during the last thirty years, a feeling of uncertainty as to the application of the principles as to the rating of machinery had been gradually growing until it had developed into something like two rival views, having little in common with each other. It was agreed that machinery could not be directly rated, and that the only way in which the parish could put it under contribution was to regard it as enhancing the value of the hereditament with which it was connected, and which was the direct subject of assessment. But how to do this was the problem which had given rise to so much difference of opinion. On the one side, it was contended that the only practical way of measuring the enhancement was to consider what the machinery was worth as it was and where it was, and to put on such a percentage as a landlord could afford to let it at and a tenant would be reasonably likely to pay, as representing the addition that should be made to the rent of the building for the purpose of assessment. On the other side, the argument was that capital values and percentages were entirely beside the question, and that what the valuer had to find was the additional amount which a tenant would be willing to pay for the convenience of having the machinery *in situ*, and the building adapted to it as a going concern. Unfortunately, the courts of law had not given much assistance to the valuer of late years in deciding between the rival contentions, viewing it rather as a question of fact for him to settle with the help of his experience and good judgment than as a matter of law upon which any definite rules ought to be laid down for his guidance. Incidentally, however, some light was thrown upon the subject by the cases which had been from time to time decided, and especially the earlier ones.

The author then dealt with a number of legal cases bearing on the subject, mostly subsequent to the year 1840, when the Act for exempting personal property from rateability was passed. In the case of the King *v.* Lord Granville, in 1829, a lessee of a coal mine, who was also the occupier, had erected a steam engine and laid down a railway for the working of the mine. His royalties amounted to 802*l.*, and he was rated at 989*l.*, the difference of 187*l.* being charged in respect of the engine and railway. He was held to have been properly rated at the larger sum; the court remarking, in reference to one point raised in the case, that it was immaterial whether the engine and railway had been put in by the tenant or the landlord. In that case, however, the additions were pure fixtures, and became part of the realty by their physical attachment to the soil, so that the case did not help with regard to the debateable articles of machinery which formed the chief subject of contention at the present time. The case of the Queen *v.* Guest, though decided before 1840, proved that personal property was not charged to the poor rate in the parish where it arose, so that it stood on the same footing as the cases after the passing of the Act of 1840. The important part of the judgment was that Lord Denman said that "real property ought to be rated according to its actual value, as combined with the machinery attached to it," drawing no distinction whatever between the method of valuing the building and the machinery, although the latter was not built into the walls or floors, but only secured to fixed frames, and was easily removable. In the Queen *v.* the Southampton Dock Company (1851) the question was, whether a percentage on the whole value of the machinery in dispute should be deducted on the ground of its being part of the tenants' capital, and the effect of the judgment was that the deduction was not allowed. As 25 per cent. was allowed for tenants' profits, the result was that the assessment on the freehold was increased by 25 per cent. on the existing value of the machinery in dispute, less repairs. This was, in effect, making the machinery rateable, and rateable to the full amount of its value. In 1860, in the North Staffordshire

case, the judgment in the Southampton case was confirmed, and the well-known division of machinery, etc., into three classes was made by the court. First, things movable, such as the furniture; then, things so attached to the freehold as to become part of it; and thirdly, things which, though capable of being removed, were yet so far attached as that it was intended that they should remain permanently connected with the railway or the premises used with it, and remain permanent appendages to it as essential to its working. This classification had never since been disturbed. The effect of the decision was to exclude the machinery in question from tenants' capital, and the percentage allowed upon its entire existing value would therefore be added to the amount at which the property was rateable. In the Queen *v.* Lee, one might fairly come to the conclusion, in reading the judgment, that if a machine, though attached to the building where it was found as part of the plant, was attached for the enjoyment of the thing itself, that was to say, for its better working, it would not be rateable, and should not be taken into consideration by the rating valuer. And this was the decision of the same court in the following year, in the case of the Queen *v.* Halstead. Up to this time there had been no distinction drawn between machinery which was to be taken as part of or combined with the freehold and that which was to be regarded as merely enhancing its value for rating purposes. There had been a classification in the terms he had quoted, but, if the court held that the debated articles were rateable or the contrary, they were transferred bodily from one category to the other, and the premises as such were rated accordingly. In Chidley *v.* West Ham, however, Mr. Justice Blackburn used an expression which, repeated as it had been in various subsequent cases, had given rise to the existing divergency of views among rating surveyors and text writers. The question there was as to the rating of certain tanks, mash tuns, and similar articles in a distillery; and Mr. Justice Blackburn, in giving judgment, said: "Whatever is fixed to the realty so as to pass as landlord's fixtures in a demise of the premises must be taken to be part of the premises for the purpose of ascertaining its rateable value. . . . I am not prepared to say that the various articles described in the present case may not be taken into account as enhancing the value of the premises, but that question is not asked, and we are only to say whether the things are rateable." He added that all the items in that case were nothing more than chattels which steadied themselves by their weight or with the slight assistance of a screw, and that they were not fixtures, and not rateable as part of the premises. The question therefore arose whether, in similar cases, though the disputed articles were not rateable *per se*, they ought not to be "taken into account" as enhancing the value of the premises, and, if so, on what principle. As already stated, except where fastenings and connexions were mentioned, all the things in dispute were retained in their places by their own weight merely, and all of them were bought and sold as separate articles. It was not clear whether these things would have been held rateable under the previous decisions—he was inclined to think not. For it was to be remembered that, in all the previous cases but one, the articles in dispute were in fact attached to the freehold. The one excepted case was the North Staffordshire, where there were certain electrifying and weighing machines which were unattached. It was not quite clear from the judgment whether these were held rateable or not; but as "things movable, such as office and station furniture," were held exempt, probably these were included in the exemption. It was perfectly clear that Mr. Justice Blackburn would have called them chattels, and he was a member of the court by which the North Staffordshire case was decided. If that be so, we had a distinction, observed at any rate down to the year 1874, when the West Ham case was decided, that machinery fixed to the freehold, so as, in intention and in fact, to form part of it, was held rateable, while machinery unfixed and movable was held not rateable, though in Mr. Justice Blackburn's view it might be taken into account as enhancing the value of the premises for rating purposes. And the fact that the latter had pipe connexions, or was worked by gearing, or was fixed for the purpose of steadying it, made no difference.

The author then dealt with the cases of Laing *v.* Bishopwearmouth, and the Tyne Boiler case (1886), which last case did not purport to extend the principles already laid down, and it scarcely touched the question as to the mode in which the machinery in question was to be taken into account. Other cases dealt with were:—Gifford *v.* the Chard Union, and Kirby *v.* the Assessment Committee of the Hunslet Union, decided last year. The Recorder in the Kirby case would not adopt the 20*l.* given by the respondents as representing the value of the machinery, but halved it; but in the rider finally explaining his judgment, he said:—"I held that, in inquiring what was the gross estimated rental and the rateable value, the basis of the problem was to ascertain what was the rent which a hypothetical tenant would give for the engineering works as a combination of land, buildings, and scheduled machines on a demise which included the right to use the scheduled machines, that is to say, on the assumption that the hypothetical tenant would get as part of the consideration for his hypothetical rent the right to use such machines upon the premises during his tenancy, and that in this way the scheduled machines were being properly taken into account as enhancing the rental and rateable value of the freehold. I also hold that the value of the user of the machinery was not necessarily to be arrived at by taking the cost or value of the machinery and putting a percentage on such value, as had been done by the respondents' valuers." "Not necessarily," of course, but as the most obvious way, he (the author) suggested in the majority of cases. The Recorder did undoubtedly take the value of the user of the machinery as representing its rent, and that was something tangible, which there was not much difficulty in getting at. The naked words of the judgment of the Divisional Court would seem to leave the whole matter to the discretion of the valuer, but the affirmance of the Recorder's decision must be taken as an affirmance of the principle he adopted.

In the Court of Appeal Kirby's case was fully argued for the appellant, but the respondents' counsel was not called upon, the court holding that they were bound by the Tyne Boiler case. In the House of Lords, Lord Halsbury said:—"The overseer has a comparatively simple problem to solve, although it is difficult enough sometimes; he sees the place being conducted as a brewery or an iron foundry, or what not; he looks at the premises, he looks at the furniture which is necessary for carrying on the business as a brewery or foundry . . . and he says to himself, 'Well, looking at the whole of the place, such and such is the rent that would probably be paid by a tenant from year to year for such an establishment as this.'" It was a question of the rent which the hypothetical tenant would give for the combination of land, buildings, and machines.

As a whole, it was almost impossible for any impost to be in a more unsatisfactory position. It was not only levied with uncertainty where the law purported to be carried out, but, owing to the tendency of the impost to put a fetter upon industry, there were in many localities the strongest reluctance to levy it at all, amounting in a large number of instances to a positive refusal. Hence the practice as to the rating of machinery in different places was of the most divergent kind.

A hearty vote of thanks was accorded to the author.

THE EDINBURGH BUILDING TRADE.—At the Edinburgh Dean of Guild Court on the 25th ult.—Lord Dean of Guild Wilson presiding—plans were passed representing in all about 40,000*l.* There were twenty-seven cases on the roll, and twenty warrants, including several remits to the Burgh Engineer, were granted. Warrant was given to J. & G. Cox, Ltd., glue and gelatine manufacturers, for new buildings at Gorgie Mills. This is an addition to the present works of the company, and it is estimated that the cost will be about 10,000*l.* There will be two three-story buildings, and these will cover about three-quarters of an acre of ground, while the floorage over the whole will extend to 1¼ acres. The buildings will be constructed from the designs of Messrs. Geo. Beattie & Son of brick and steel, with timber roofs.

THE ARCHITECTURAL ASSOCIATION SPRING VISITS.

I.—NEW SESSIONS HOUSE, OLD BAILEY, E.C.

THE current series of spring visits commenced on Saturday, January 27, when a large body of members inspected the new buildings of the Central Criminal Court now nearing completion. This is the second occasion upon which the Architectural Association has been privileged to examine the work. An account of the first visit was given in our issue of February 25, 1905, and at the time the absence of the architect, Mr. E. W. Mountford, from reasons of health, was much felt, and it was further regretted, upon the present occasion, that similar reasons prevented the author attending. In his absence Mr. F. D. Clapham described the design and materials, and explained the various difficulties contended with.

The recent removal of scaffolding affords a good general view of the façade, and we find, on comparing the building with the competition design, published in the *Builder*, June 30, 1900, that a great deal of architectural freedom has been introduced.

We see, for instance, that the pediments on the Old Bailey front now have their horizontal members broken and stopped short above the pilasters. Into the tympanums some florid work arising from the fenestration has been inserted. The allegorical figures which predominate have little to do with the space, their low relief is unsatisfactory, and the work is sculpture not in relation to architecture. The pediments themselves have too flat a projection. The tower and dome, although hidden from the street by scaffolding, appear to have been subjected to the same free application of current popular detail when compared with the original proposal. The restraint and feeling for tradition in the original design are lost.

The elevations show that the solids and voids are not happily managed. The "rustication" scale is too small, but it is perhaps owing to the re-using of the stones from the old building that there appears to be an absence of harmony with the new features. The blocks in the architraves to the windows are disturbing to the play of surface, which is felt to be required, and the lead glazing of the windows is not suitable.

Internally, the foregoing remarks are applicable, and we see the important semicircular arches of the first design replaced by features of segmental form with a corresponding coarseness of detail. It is safe to say, however, that the effect of the main halls, corridors, and staircase, although not overburdened with light, will be very fine indeed. Ample space is provided in and about the entrances to the courts such as a building of this importance should receive. The decorative aspect of these parts will have a strong character. Marble is used for wall linings in a broad manner and in good choice; for the execution of this Messrs. Lee Brothers, of Bristol, are to be complimented. Some good specimens of Scagliola work are supplied by Messrs. Bellman, Ivey, & Carter, while the vaulted ceilings have been finished in "Stonuvelle," an interesting stone-like material well worked by Mr. Seale. Other marble linings and floors are provided by Messrs. Anselm, Odling, & Co.

The interiors of the four courts, although far from completion, do not give promise of great architectural conceptions. There is a coarseness of detail in the plaster-work of the domed ceilings and barrel-vaults. This is particularly felt in the pendentives of the ceiling in the large court, where the prominence given to the inlet gratings of the plenum ventilation system is unpleasant.

Some excellent design is to be seen in the judges' rooms, library, barristers' smoking-room, etc., which have coved ceilings and oak panelled walls. A number of good ornamental ceilings have been supplied by the Bromsgrove Guild.

The structure generally is the work of Messrs. Holloway Brothers, whose conduct of the great undertaking is seen to be very thorough and well performed.

EXHIBITION AT NUREMBERG.—The Bavarian Jubilee Exhibition of Trades, Industry, Arts, and Crafts is to be held at Nuremberg from May to October, 1906, under the patronage of the Prince Regent.

THE LONDON COUNTY COUNCIL.

THE ordinary weekly meeting of the London County Council was held on Tuesday in the County Hall, Spring-gardens, S.W., Sir E. Cornwall, M.P., presiding.

Loans.—On the recommendation of the Finance Committee, it was agreed to lend Poplar Borough Council 1,058*l.* for paving and channelling works, and to sanction the borrowing by Finsbury Borough Council of 16,030*l.* for repaving works.

Payment of District Surveyors by Salary.—A long discussion took place on the report of the Building Act Committee on the payment of District Surveyors by salary. The report was printed in our issue for December 16 last. The Finance Committee have since submitted the following report on the same subject :—

"The Building Act Committee have forwarded to us particulars of a proposal which they are about to submit to the Council for the payment of district surveyors by salaries, and for the abolition of the existing system of remuneration by fees which the district surveyors collect from builders and others. The Building Act Committee in their report, which is at present before the Council, express the opinion that it is desirable to substitute fixed salaries for the present system of remuneration, and, as the adoption of this course would involve expenditure, to be recouped out of the fees which the Council would be entitled to receive, it devolves upon us, under standing order No. A 190, to report upon the matter.

Sect. 158 of the London Building Act, 1894, provides that "the Council may at any time by order cause such fixed salary as they may determine to be paid to any district surveyor by way of remuneration instead of fees, so that the amount of such remuneration be not less than the amount of the average of the fees for the last seven completed years preceding such determination, and thereupon the fees which would have been payable to such district surveyor in pursuance of this Act shall be paid to the Council, and carried to the credit of the county fund."

The return submitted by the Building Act Committee of the fees received during the seven years ended 1904 shows that the average annual receipts of district surveyors from fees amounted to 50,748*l.* 8*s.*, that, with the exception of one year, there was a continuous increase in the fees received, and that in 1904 the fees amounted to 52,931*l.* 15*s.* 6*d.*

It would therefore appear that, in the event of the Council deciding to exercise the powers conferred by the section, the salaries to be paid to the district surveyors would, assuming that the figures for the year 1905 shall be found to follow the upward tendency of recent years, result in a balance in favour of the Council of upwards of 2,000*l.* a year.

The proposal of the Building Act Committee, however, is not limited to the substitution of salaries for fees on the basis of the section above referred to. The more important part of their proposal is to institute a model scheme, to be brought into operation gradually as circumstances permit, under which the Council, instead of paying salaries covering all the expenses of the district surveyors for assistance, office accommodation, etc., should pay to each a net salary, and in addition the salaries of any necessary assistants, the cost of offices, etc. The committee state that owing to the fact that there are now several vacant districts, and that other vacancies are likely to occur in the near future, the present time is opportune for the Council to make any such change of system as is proposed.

The Building Act Committee state that, in the event of the model scheme being adopted, the total annual cost of the service would ultimately be reduced to about 40,245*l.*, and that there would thus be an increased margin to secure the Council against loss by shrinkage of fees, etc. The model scheme provides for the division of London into thirty-three districts instead of fifty-seven, as at present, and it is indicated that the salaries of the district surveyors would be 1,000*l.*, 800*l.*, or 500*l.* a year, in accordance with the importance of the district. It is proposed that in all but two of the sixteen districts where the salary is to be 1,000*l.* there shall be one or two professional assistants, and, in one case, three assistants, at a uniform salary of 200*l.* each. In the other two districts, and also in the eleven districts at 800*l.*, and the six districts at 500*l.*, no assistant is proposed. Every surveyor is to be provided with a boy clerk at the rate of pay of 15*s.*, rising to 25*s.* a week, and allowances for office expenses are suggested at 150*l.* or 200*l.* a year, according to the district.

We do not find ourselves in a position to judge whether the suggested amount of professional and clerical assistance is sufficient, but, having regard to the fact that it is proposed that the district surveyors shall collect the fees which will in future be receivable on behalf of the Council, it will be necessary for their accounts to be kept in such a manner as to be easily examined and audited by the Council. We have therefore considerable misgivings whether the provision for staff will be found to be adequate.

With regard to office expenses, we feel that so soon as district surveyors become the salaried officers of the Council there would be a tendency to regard many of the present offices as unsuitable, and to secure more expensive accommodation in prominent positions. We are, moreover, advised that, in the event of district surveyors being paid by salaries, the Council will probably have to provide them with more legal assistance than at present, and the cost of taking any necessary proceedings for recovery of fees would also fall upon the Council, the increase of expenditure for this additional legal work being estimated at from 300*l.* to 500*l.* a year, for which no provision has been made in the above-mentioned estimate of 40,245*l.* We are informed by the Building Act Committee that the cost of furnishing thirty-three offices comprised in the model scheme would involve additional expenditure, not included in the estimate, of 950*l.*, but this, of course, would only occur once, viz., on the establishment of new offices.

We are very doubtful whether the model scheme could be carried out except at a cost considerably in excess of the estimate of the Building Act Committee.

As regards the receipts, we are of opinion that the mere adoption of a salary system would remove some of the incentive at present existing to the discovery by district surveyors of cases under the Building Act in respect of which fees are payable, and would probably lead to a diminution in the total fees recovered; and we are by no means satisfied that, when all the available vacant land in the county shall have been built upon, the present upward tendency of the total fees received might not, in the normal course of events, be replaced by a downward tendency.

We have felt it our duty to urge, from a financial standpoint, the above misgivings as to the benefits to be anticipated from the adoption of the proposed scheme, but it rests with the Council to determine whether the scheme submitted is best calculated to secure the objects in view, and whether considerations, other than financial, should override the risk which we anticipate in certain eventualities of a possible charge upon the rates from which, under the present system, the Council is secured."

The Building Act Committee now recommended :—

"(*a*) That as from and including April 1, 1906, all district surveyors be paid a fixed salary by way of remuneration instead of fees; that the amount of salary to be paid to each of the present district surveyors be equal to the amount of the average of the fees received in his district during the seven years ended December 31, 1905, as provided in sect. 158 of the London Building Act, 1894; and that the Building Act Committee do submit the necessary recommendations to give effect to this decision.

(*b*) That the model scheme submitted by the Building Act Committee for the ultimate rearrangement of district surveyors' districts and for the payment of district surveyors by salaries be adopted, and that with regard to the existing and all future vacancies the Building Act Committee do submit to the Council such recommendations for filling the vacancies as will be most in accord with the model scheme."

Captain Hemphill, Chairman of the Building Act Committee, in moving the adoption of the Report, said that it was true that the District Surveyors' Association were opposed to the scheme, but he did not think that the reasons they put forward should induce the Council to reject it. At present many district surveyors devoted much of their time to private work, and it was desirable that this time should be given to the public service. As to the suggestion that the scheme, if carried out, would not attract men of the highest capacity, the salary proposed would be from 500*l.* to 1,000*l.* clear of expense. The Council had long ago decided that it was undesirable for architects in practice to act as district surveyors, and all new district surveyors were forbidden to practice, and the salaries proposed under the scheme would compare favourably with those obtaining in other similar occupations. There were, of course, those who did not like the committee's proposals, but those proposals, if carried out, would be an improvement in the general condition of affairs. It was not a perfect scheme, but the Council had a definite opportunity of deciding that district surveyors should be paid by salaries instead of by fees, and that the districts of London would be remodelled and reconstituted in accordance with the requirements of to-day.

Mr. Goldsmith moved that the matter be referred back to the Building Act Committee. He said that the Report was carried only by the casting vote of the Chairman. The calculations of the Building Act Committee were quite misleading. Under the present arrangements the district surveyors paid for assistance and office expenses, etc., and there was no charge on the ratepayers in such matters, whereas under the proposed scheme assistants and office expenses would be no longer paid by the surveyors. Moreover, the surveyors would want better office accommodation under the Council. In seventeen districts it was proposed to give the district surveyors no assistance beyond a boy clerk, and how was it to be expected that the surveyors could carry out all their duties under the Act? It was impossible for the work to be carried out efficiently. How could one man look after an enormous district like Lewisham? A much larger staff would be wanted by the surveyors, and a larger staff would be required at the central offices. The scheme was based on the assumption that the fees would remain the same, but in the future it was probable that the amount of the fees would be reduced when the whole of the land in the county was built upon; and it was possible, when the surveyor no longer worked for fees, that there would not be quite the same zeal in their collection, though he did not say that the surveyors would not carry out their professional work with zeal. Again, the position would be an absurd one if this scheme were carried. Under the last Act the surveyor could collect and retain fees; under the 1904 Act he would collect fees and hand them over to the Council; and under the Dangerous Structures Act the fees would be paid over to him by the Council, who would collect them.

Mr. Goodman seconded. As an old London contractor who knew district surveyors he felt sure that it would be impossible to carry out the scheme. If a surveyor had an enormous district to look after, and assistants had to be left to look after builders and say how the Act was to be carried out, he wondered what sort of buildings would be put up in London. Surveyors under the proposed scheme would not feel the same responsibility as they do now. As to the collection of fees, he had known a surveyor wait for two and a half hours for the fees, which the builder had had to obtain from a solicitor who financed him. Would a surveyor under the proposed scheme be as zealous in the collection of the fees? In Islington there were 47,700 assessments, and if one surveyor was going to look after that number of buildings he did not know how it was going to be done. He felt sure that the cost to the Council would be considerable, and he hoped the scheme would not be agreed to, especially as the surveyors did their duties well, and any difficulties were occasioned by the assistants to the surveyors.

Mr. J. Lewis said he was opposed to the scheme, and he regarded it as a dangerous one. What was proposed was more drastic than appeared at first sight. It would undoubtedly involve an immense amount of cost, though in the first year that might not be the result. Under the present system there were some very excellent men, and the Council would not get these men to take up the work at a fixed salary. More than that, under the new scheme there was the danger of a system of patronage which might be put in the hands of these officers, and the Council did not want to repeat the maladministration of the Metropolitan Board of Works.

Mr. Phillimore said he thought the scheme ought to be carried out. The Council had set up the standard that, as far as possible, they should employ their officers direct, and pay them by salaries, and not by fees. The scheme would be found to be more economical than the present system. The advertisement canvasser to the Tramways Department was paid by salary, and not by commission, although that was the usual method of payment. It was said that the present system worked well; it worked fairly well, but that was because there was strict supervision, and in the past the system had not worked particularly well. The Council had really extraordinarily little control over surveyors and their assistants. It was said that it was doubtful whether the fees would be collected as well under the proposed scheme as they were now, but if the Council put that confidence in the surveyors which they thought they were entitled to put in them he believed that they would do their duty towards the Council in the matter. Even now the collection of fees was not very efficiently done, and he knew of a surveyor who had not troubled to collect all his fees. As to the anomalies mentioned by Mr. Goldsmith, it would be quite possible to pass an amending Act if surveyors would not voluntarily come into line. The reason for the increasing fees was that London was being built upon more and more, and as to the view that fees would diminish in amount as soon as the remaining land of London was built upon, the rapid decay which went on was such that, even if the whole of London were built upon, in a very short time it would commence to be rebuilt.

Mr. Stuart Sankey said that sometimes, when small alterations were carried out on buildings, the surveyor's legal fees were greater than the cost of the work, but under the present arrangement those fees were rebated by the surveyor. If the proposed scheme were carried, would the Council

have the same power to rebate absurdly disproportionate fees as the surveyor had? At present for a little alteration costing 4*l.* the fees might be 40*l.*

Sir Melville Beachcroft said that the question of the status of the district surveyor and his fees had been under discussion for over thirty years, and surely the time had come when the whole question should be considered. The Council had the power of making a very drastic reform, and he hoped they would deal with the question not with the idea of making the surveyor a paid officer, but of deciding what those duties are. The position was peculiar, for the power of the surveyor was of a very arbitrary character. On the one hand, a settlement of the difficulty seemed to be that the work of the district surveyor should be carried out by the borough surveyor; but, on the other hand, it seemed desirable for him to be in an independent position. Would the proposed scheme result in greater efficiency and economy? As to economy, he was not at all convinced, and, as to efficiency, he had yet to learn what would be the actual effect on the district surveyor if they converted him into a salaried officer. The Council ought to have a report from the superintending architect as to whether this divided responsibility in regard to the supervision of building in London was good for London, and a report from surveyors also. By the proposed scheme the Council ran the risk of getting an inferior class of men and inferior supervision.

Mr. R. A. Robinson said that the question was a very difficult one, which wanted full consideration. In the provinces the work of the borough surveyor and the district surveyor was carried out by one authority. He was opposed to the proposed scheme.

Colonel Rotton said that the present arrangement was a fairly satisfactory one; would the proposed scheme prove equally satisfactory? He had his doubts. The staff of the Architects' Department would have to be largely increased if the scheme were carried.

Mr. Howell J. Williams said he was in favour of the payment of district surveyors by salaries as a consequential step to the alteration made in the status of the district surveyor some time ago. As the London County Council was responsible to London for the administration of the Acts, payment by salaries would make the district surveyors the real agents of the Council, as they should be. But no scheme should rob the surveyor of his independent authority so long as he properly administered the Acts. The objection to the present scheme was that it would set up another district surveyors' system, and result in a lot of duplicating and overlapping work at headquarters, and the tendency would be for the clerks at headquarters to interfere with and destroy the authority of the surveyor. For that reason he should vote against the scheme.

Mr. Davis said that if the scheme were carried it would be an evil day for London. If, as they had been told, a surveyor could neglect to collect his own fees at present, how much more likely was he to neglect to do so when the fees were for someone else? At the present time the responsibility of seeing that the law was carried out rested with the surveyor, but under the new scheme the superintending architect would have the responsibility. He hoped that the present arrangement would continue.

After further discussion, the amendment was carried, on a division, by fifty-five votes to forty-nine.

Sites for New Schools.—The following recommendations of the Education Committee were agreed to :—

"(a) That the estimate of expenditure on capital account of 9,725*l.*, submitted by the Finance Committee in respect of the acquisition of the sites named in the subjoined tables, be approved :—

Table A—Site for new school: Norwood, Crasterroad. Table B—Sites for J.M. school, schoolkeepers' houses, etc. :—(*a*) Clapham, Home for Little Boys, King's-road (land at rear); (*b*) Fulham, Harwood-road (house for schoolkeeper); (*c*) Lambeth, N., Walnut-tree-walk (house for schoolkeeper); (*d*) Lewisham, Hither-green (land for J.M. school); (*e*) Lewisham, St. Mary-road (house for schoolkeeper); (*f*) Newington, W., Beresford-street (house for schoolkeeper); (*g*) St. George-in-the-east, Globe-street (house for schoolkeeper); (*h*) Southwark, W., West-square (house for schoolkeeper); (*i*) Stepney, Baker-street (house for schoolkeeper); (*j*) Stepney, Senrab-street (house for schoolkeeper); (*k*) Woolwich, Ancona-road (house for schoolkeeper).

(*b*) That expenditure on capital account not exceeding 9,725*l.* in respect of the acquisition of the sites named in resolution (*a*) be sanctioned.

(*c*) That the Education Committee be authorised to take all the necessary steps in connexion with the acquisition of the sites named in resolution (*a*); that the valuer and the solicitor do complete the purchases, and that the seal of the Council be affixed to the necessary documents when ready.

(*d*) That the estimate of expenditure on capital account of 8,950*l.*, submitted by the Finance Committee in respect of the acquisition of the sites named in the subjoined table, be approved :—Deptford, Ariga-road (site for new school); Kennington, N., Mary-place (site for school for mentally defective); St. Pancras, S., Manchester-street (site for laundry and housewifery centres, etc.); Wandsworth, Fountain-road (additional land); Woolwich, Mulgrave-place (house for housewifery centre).

(*e*) That expenditure on capital account not exceeding 8,950*l.* in respect of the acquisition of the sites named in resolution (*d*) be sanctioned.

Tramways.—The following recommendations of the Highways Committee were agreed to :—

"(a) That the estimate of expenditure on capital account of 12,200*l.*, submitted by the Finance Committee, in respect of the reconstruction (excluding rails) of the existing single line of tramway in Goswell-road, between Clerkenwell-road and Upper Ashby-street, for the underground conduit system of electric traction, be approved.

(*b*) That the capital estimate of 6,600*l.* approved on March 1, 1904, in respect of the reconstruction of tramways in Goswell-road, be cancelled."

Acetylene and Cinematograph Regulations.—The following recommendations of the Theatres and Music Halls Committee were agreed to :—

"(a) That the undermentioned alterations be made in the regulations made by the Council on January 28, 1902, with regard to the use of acetylene gas in theatres and premises licensed by the Council :—(1) That the following regulation be substituted for the present regulation, No. 1: "(1) under no circumstances will the production or use of highly compressed or liquefied acetylene be permitted (such procedure is illegal), but 'dissolved acetylene' may be used under the conditions set out in the Order of the Secretary of State, No. 6, made under the Explosives Act, 1875, provided the gas is not allowed to come into contact with copper or copper alloys." (2) That the following regulation be inserted as regulation No. 2, and that the necessary consequential alterations be made in the numbers of the remaining regulations: "(2) In the case of gas generated and stored, its pressure must not exceed that necessary for driving it through the burner. This pressure shall not be greater than 20 in. in the generator or 5 in. in the holder or service pipes." (3) That the words "or storing" be omitted from regulation No. 3 (old number).

(*b*) That the following words be substituted for the words "The use of acetylene gas will not be permitted" in No. 5 of the regulations made by the Council on October 16, 1900, with regard to the use of cinematograph lanterns, etc., in theatres and premises licensed by the Council :—"The use of acetylene gas, other than 'dissolved acetylene,' will not be permitted. When 'dissolved acetylene' is used the conditions set out in order No. 6 of the Secretary of State, made under the Explosives Act, 1875, must be complied with, and the gas must not be allowed to come into contact with copper or copper alloys."

Fall of Parapets, etc., in Akerman-road, Brixton.—The Building Act Committee brought up the following report :—

"We have to report that on January 24, 1906, portions of the front parapets and cornices of Nos. 47 to 53, Akerman-road, Brixton, fell on the pavement below, with the result that one person was killed. The premises were subsequently inspected by the district surveyor, who condemned as dangerous other portions of the front wall, and statutory notices have accordingly been served. The parapets and cornices of the adjoining premises, Nos. 35 to 45, Akerman-road, which were also condemned as dangerous, have been taken down. In view of the fact that the matter is being considered by the coroner, we do not propose to make any observations thereon at present, but we are of opinion that the Council should be reminded that similar accidents are by no means infrequent, and that in most cases they are the results of faulty construction."

New Post-Office Building, Hanover-street, Peckham.—The Building Act Committee reported that in August, 1905, Mr. J. Wager, on behalf of His Majesty's Office of Works, forwarded for the information of the Council copies of the plans of a new sorting office on the north side of Hanover-street, Peckham. The plans, which showed a building having a one-story projection about 13 ft. in advance of the building line in the street, were not such as the committee could have recommended the Council to sanction had an application for permission been made by a private individual. By sect. 202 of the London Building Act, 1894, any building, structure, or work vested in, and in the occupation of, any Government department is exempted from so much of the provisions of the Act as relate to buildings and structures; but the committee reported that it had been decided to accede to the wishes of the Council in the matter, and to keep the new building back to the line of the adjoining cottages.

Inspection of Theatres.—The Theatres and Music Halls Committee brought up recommendations to the effect that, on and after April 1, the chief officer of the Fire Brigade should be responsible to the Council for the inspection of the electric lighting installations and heating and other mechanical arrangements of theatres and other places of public entertainment licensed by the Council, and that for the purpose an electrical and mechanical engineer, at a salary of 400*l.* a year, and an electrical engineer, at a salary of 200*l.* a year, be appointed in the brigade.

Mr. H. R. Taylor said this was an important matter, which members had had very little time to consider, and he asked that it might be held over until the next meeting.

Mr. Yates said he had no objection to that course being followed.

The report was accordingly adjourned.

Tube Railway Dangers.—Mr. Lewin Sharp, the chairman of the Fire Brigade Committee, in reply to a question put by Mr. E. Smith, said the Fire Brigade were not called to an alarm of fire on the City and South London Railway. The Council had absolutely no control over tube railways; the Board of Trade had sole control, and consequently the committee had no report to present on the matter. The Board of Trade had, however, approached the Council, with the view to promoting certain regulations dealing with new tube railways. The committee had co-operated with the Board of Trade on the subject, and had formulated a model set of by-laws, and now all promoters of new tube railways would have to carry out those regulations.

Suggested London Improvements.—Captain Swinton asked the chairman of the Improvements Committee whether his committee had ever seriously considered the following schemes, which bear on the improvement of London :—(1) A suggestion which a private citizen had published and put before His Majesty's Board of Works that the entrance to Hyde Park at the Marble Arch should be remodelled, with the view of doing away with the constant congestion of traffic at that point? (2) The opening up of the Mall into the Strand through a narrow opening alongside of Drummond's Bank, which will have the result of causing a continuous stream of east and west traffic to be carried across the north and south traffic on a dangerous slope in the neck of the Whitehall bottle? (3) The proposal of the Traffic Commission that an elevated road should be constructed from Blackfriars Bridge nearly to the Holborn Viaduct, to carry the cross traffic over the junction of the Embankment and Queen Victoria-street, over Ludgate-circus, and so enable the South London tramways to be joined on to the North London tramways?

Mr. E. J. Horniman, in reply, said the Marble Arch matter had never been before the Improvements Committee, but when it was brought forward as a concrete scheme by somebody in authority the committee would consider it. The opening of the Mall on a dangerous slope had also not been before the committee, because no actual plans had been published as to how the Mall was to be taken into the Strand. He promised, however, to make inquiries as to whether the intention was only to have a very narrow entrance. With regard to the Blackfriars elevated road scheme, the Improvements Committee would, without fail, consider any suggestion that was brought forward by any person in more than a tentative form.

The Council then adjourned until February 13.

ARCHITECTS IN PARLIAMENT.—Mr. T. Ball Silcock, of the firm of Messrs. Silcock & Reay, architects and surveyors, of Bath, has been returned as member for Somerset (Wells). He is a director of Bath College, a governor of the Grammar School, a member of the Bath City Council, Chairman of the Housing Committee, Vice-Chairman of the Technical Education Committee, and has served as Mayor. Mr. Alpheus Cleophas Morton (Sutherlandshire), member for Peterborough in 1889-95, and a Common Councillor of the City of London, is an architect and surveyor practising in London. Mr. John Tudor Walters (Sheffield, Brightside) is an architect and surveyor in that city, and formerly practised in Leicester. Sir Edmund Boyle, Bart., K.C. (Taunton), is a Fellow of the Surveyors' Institution, and practised as an architect before he was called to the Bar twenty years ago.

APPLICATIONS UNDER THE 1894 LONDON BUILDING ACT.

THE London County Council at their meeting on Tuesday dealt with the following applications under the London Building Act, 1894. The names of applicants are given between parentheses:—

Lines of Frontage and Projections.

Lewisham.—Five shops on the south-east side of Staplehurst-road, two houses on the south-west side of Leahurst-road, and one house on the north-east side of Fernbrook-road, Lewisham (Mr. P. Roche).—Consent.

Bethnal-green, North-east.—One-story shops and a one-story addition at the rear of No. 379, Bethnal-green-road, Bethnal-green, to abut upon Teesdale-street (Mr. C. M. Shiner for Mr. W. A. Balls).—Consent.

Wandsworth.—That an order be issued to Mr. R. C. T. Gordon sanctioning the formation or laying out of two new streets for carriage traffic on the Durnsford-park estate, Merton-road, Wandsworth, in continuation southward of Ravensbury-road and Acuba-street (for Mr. A. Wise).—Consent.

Dulwich.—That the application of Mr. A. Keen, for Miss Chamberlain, for an extension of the periods within which the erection of buildings with bay windows and one-story shops on a site abutting upon the west side of Peckham-rye and south side of East Dulwich-road, Camberwell, was required to be commenced and completed, be granted.—Consent.

Islington, North.—That, at the request of the International Tract Society, Limited, the Council do permit the retention of a showcase on the forecourt of No. 451, Holloway-road, Holloway.—Consent.

Hammersmith.†—The retention of two two-story shops in front of Nos. 2 and 2A, The Grove, Hammersmith (Mr. L. V. Hunt for Mr. J. Bedford).—Refused.

Marylebone, West.—An iron and glass shelter in front of No. 20, Upper Hamilton-terrace, Marylebone (Mr. G. A. Sexton for Mr. J. Peters).—Consent.

Marylebone, West.—Retention of a projecting sign in front of No. 392, Oxford-street, Marylebone (Messrs. W. Castle, Limited).—Consent.

Norwood.—The retention of a conservatory at the flank and a summer house at the rear of No. 20, Wyndham-road Camberwell, abutting upon Elmwood-road (Mr. A. E. Percy).—Consent.

Strand.—Alterations to the iron and glass shelter at the entrance to the Empire Theatre, Leicester-square (Mr. F. T. Verity).—Consent.

Woolwich.—Bay windows to Nos. 34 and 40, Glenhouse-road, Eltham (Mr. J. J. Bassett for Mr. A. Cameron-Corbett).—Consent.

Westminster.—A projecting one-story shop in front of No. 131, Victoria-street, Westminster, and a projecting one-story shop at the rear to abut upon Ashley-place (Mr. W. Woodward).—Consent.

Lewisham.—A building on the northern side of Elmer-road, Catford (Mr. E. Wright for Mr. H. Amey).—Consent.

Rotherhithe.—The retention of two showcases in front of No. 233, Southwark Park-road, Rotherhithe (Mr. E. Hoad).—Consent.

Strand.—Retention of an iron and glass shelter at the entrance to Nos. 37 and 38, Savile-row, St. James (Messrs. H. Poole & Co.).—Consent.

Fulham.—A building at the rear of No. 431, North End-road, Fulham, to abut upon Eustace-road (Mr. T. J. Evans for Mr. A. Dell).—Refused.

Hampstead.—Buildings on the west side of Burgess-hill (late Belle Vue-crescent), Finchley-road, Hampstead (Messrs. Brown & Barrow for the trustees of the Burgess estate).—Refused.

Kennington.—A projecting one-story shop in front of Nos. 151 and 153, Upper Kennington-lane, Kennington (Messrs. J. A. J. Woodward & Sons for the executors of the late George Broom).—Refused.

Kensington, North.†—Bay windows and porches to twenty-six houses on the south side of Oxford-gardens, Kensington (Messrs. Trant, Brown, & Humphreys for Messrs. Daley & Franklin).—Refused.

Newington.—That the council do not accede to the request of Mr. F. F. Harris, on behalf of Mr. H. Samuel, for permission to retain a sign-board in front of No. 11, Walworth-road, Newington.—Refused.

Strand.—Projecting piers and oriel windows in front of Nos. 59, and 60, Pall Mall, Strand (Mr. E. G. Dawber for the London and Lancashire Fire Insurance Company).—Refused.

Wandsworth.—One-story shops in front of Nos. 170 to 182 (even numbers only) inclusive, Putney-bridge-road, Wandsworth (Mr. W. Bartholomew for Mrs. Bell and Mr. J. A. Graham).—Refused.

Hammersmith.—Projecting one-story shops in front of Nos. 338 and 340, King-street, Hammersmith (Mr. J. F. Ward for Mrs. Masterson).—Refused.

St. George, Hanover-square.—Enclosing of the portico in front of No. 21, Hill-street, Berkeley-square (Messrs. Keeble, Limited, for Captain H. S. Clay).—Refused.

Width of Way.

City of London.—Buildings abutting upon Red Lion-court, Fleet-street, City, with external walls at less than the prescribed distance from the centre of Red Lion-court (Messrs. Griffin & Woollard for Mr. A. Rust).—Consent.

Southwark, West.—A building on the south-eastern side of Barron's-place, Southwark (Mr. A. E. Chasemore for Mr. W. Sumpton).—Refused.

Woolwich.—A one-story shop on the south-west side of Cross-street, Woolwich (Mr. W. C. Poole for Mr. J. T. Smith).—Refused.

Width of Way and Lines of Frontage.

Hammersmith.—A coal store on the western side of Iffley-road, Hammersmith (Messrs. J. Dorey & Co., Limited, for the trustees of the Godolphin and Latymer Girls' school).—Consent.

Lewisham.—An addition and a urinal at the "Hanover Arms" public house, No. 32, Wells-road, Sydenham, with external walls at less than the prescribed distance from the centre of the roadway of such street (Mr. A. J. Style for the Dartford Brewery Company, Limited).—Consent.

Wandsworth.—An addition to No. 90, St. Ann's-hill, Wandsworth, abutting upon the western side of Allfarthing-lane (Mr. W. West for Mr. F. R. Turtle).—Refused.

Kensington, South.—Retention of an iron and glass covered way to the entrance to No. 3, Douro-place, Victoria-road, Kensington (Miss F. A. Lee).—Refused.

Width of Way and Space at Rear.

Greenwich.—Two buildings on the east side of Georgette-place, King George-street, Greenwich, with external walls at less than the prescribed distance from the centre of the roadway of Georgette-place, and with an irregular space at the rear of the northernmost of the two buildings (Mr. H. Adams).—Consent.

Lines of Frontage and Construction.

Hammersmith.—Retention of a building at the rear of a stable on the west side of No. 93, Goldhawk-road, Hammersmith, abutting upon the east side of The Grove (Mr. W. B. Eyre).—Consent.

Strand.—An iron and glass shelter in front of the hotel "Maison Jules," Jermyn-street, Strand (Mr. G. D. Martin).—Refused.

Formation of Streets.

Whitechapel.—That the application of Mr. R. Plumbe, for an extension of the period within which the widening and adaptation as a street for carriage traffic of the northern portion of Romford-street, Mile End Old Town, was required to be clearly defined throughout by posts and rails or so otherwise as the Council might permit, and thrown open to the public as a highway, be granted.—Consent.

Norwood.—That the Council accede to the request of Mr. J. Wilson, with regard to the formation of proposed streets on the Highview-park estate, Canterbury-grove, West Norwood, for permission to define the roadways of the proposed streets (where not already defined by the erection of buildings or by a cutting 4 ft. in depth) by posts 10 ft. apart and a trench 1 ft. in depth between, and in a line with, such posts.—Consent.

Space at Rear.

Kensington.—A modification of the provisions of section 41 with regard to open spaces about buildings, so far as relates to No. 2, Charles-street, Kensington, with an irregular space at the rear, and with a portion of such building extending above the diagonal line (Mr. A. B. Rumball).—Consent.

Space at Rear and Alterations to Buildings.

St. George, Hanover-square.—A deviation from the plans approved for the erection of an addition at the rear of a building on the north side of Farm-street, St. George, Hanover-square, so far as relates to the substitution of a men's mess-room on the first floor for the dwelling rooms shown on the approved plans and the construction of the flat roof of such mess-room of wood, covered externally with lead, in lieu of iron and concrete (Mr. J. W. Bradley for the Council of the City of Westminster).—Consent.

St. George, Hanover-square.—Additional rooms over the stables at the rear of No. 81, Eaton-square, St. George, Hanover-square (Messrs. G. Trollope & Sons for Mr. H. D. Brocklehurst).—Refused.

Buildings for the Supply of Electricity.

Fulham.—A deviation from the plans approved for the construction and erection of iron, brick, and concrete additions to the generating-station, Townmead-road, Fulham, so far as relates to the formation of an opening in the wall of the store building, the removal of the brick partition in the basement between the store building and the boiler house (the ground floor over the opening formed being supported by steel beams) and an alteration in the steel construction of the roof of the store building (Mr. A. J. Fuller for the Council of the Metropolitan Borough of Fulham).—Consent.

Dwelling-houses on Low-lying Land.

Peckham.—A dwelling-house on low-lying land situated at Colmore-road, Peckham (Mr. S. Bryant).—Consent.

Woolwich.—A shop and dwelling-house, with stable and coachhouse at the rear, on low-lying land situated at the corner of Abbey-wood-road and Bostal-lane, Woolwich (Mr. Patterson).—Consent.

Southwark, West.—Two blocks of dwellings on low-lying land situated at the corner of Webber-street and Barron's-place, Southwark (Mr. W. Sumpton).—Consent.

The recommendations marked † are contrary to the views of local authority.

ARCHITECTURAL SOCIETIES.

LEEDS AND YORKSHIRE ARCHITECTURAL SOCIETY.—At the rooms of this Society, on Thursday, the 25th ult., Mr. A. Needham Wilson read a paper on "The Architecture of Southern France," Mr. H. S. Chorley in the chair. The lecturer said:—"I propose to deal with the influences which governed the production and development of architecture after the withdrawal of Roman domination in the south of France, and particularly Provence. A student visiting the south of France for the first time cannot fail to be struck by the examples of Romanesque architecture more than by anything else, and in Provence he will be bewildered by the impression that no intermediate styles seem to bridge the gap between the degenerate Romanesque and the late Gothic, or even the Renaissance. To deal with the subject as a whole would hardly come within the scope of a single paper, and, with your permission, I will deal in particular with the Romanesque in Provence. May I be pardoned if I dip briefly into history, but a rough outline is necessary on which to base the other aspects of the subject." The lecturer then dealt with the occupation of Provence by the Romans, the influence of the Franks, and the rapid advancement of learning and arts under Emperor Charlemagne, and the permanent state of civil war. "There remains the ecclesiastical aspect. I will not stay to dwell upon the part that Arles has played in the history of the church, on Constantine, or on the church councils; rather let me emphasise the noble part played by the church during the horrible centuries which preceded the Renaissance of the XIth century. Having now sketched the conditions and influences under which these isolated religious communities existed, we must glance at the architecture which they produced. As Viollet-le-Duc says:—'The fragments of architecture which remain to us of the VIth and VIIth centuries are but pale reflections of the Roman art, often of *débris* thrown together haphazard by unskilful workmen executing masonry and brickwork with much difficulty.' In Provence, as well as in its vicinity, many buildings appear to incorporate Roman fragments—we are told that these are slavish copies, but it would be wrong to jump to too hasty a conclusion on the point. There are some typical examples, as the porches at Notre-Dame, at Avignon, and at Aix en Provence, which appear to bear the stamp of Roman work, and a little consideration will tell us that they are but slavish copies; but, coming nearer, we find a delicacy of execution which seems to indicate that they are either genuine Roman fragments or copies by craftsmen who were certainly not ignorant of traditional training; also the positions occupied by these fragments frequently indicate an incongruity of treatment quite incompatible with original work. One of the first problems which confronted the Provencals was the covering of their buildings. The country produced no suitable timber, but stone in plenty. The School of Provence contented itself with the simple pointed barrel-vault over narrow, low naves only, trusting to the massiveness of the wall to resist the thrust, or, where aisles were adopted, formed a kind of continuous flying buttress, and raising the walls over the arcades sufficiently to be pierced with windows." The lecture was illustrated by numerous sketches. Mr. Butler Wilson, in proposing a vote of thanks to the lecturer, said that he noted with pleasure the individuality of the architecture of Provence, and the way they had overcome the difficulties by purely local materials. Mr. A. E.

Kird seconded, and Messrs. Chorley and Hope supported the resolution, which was carried.

SHEFFIELD SOCIETY OF ARCHITECTS AND SURVEYORS.—At a meeting of the Sheffield Society of Architects and Surveyors which was held on the 25th ult. Mr. C. F. Innocent delivered a lecture on "English Renaissance Architecture, 1650 to 1700." Mr. W. J. Hale presided. The lecturer first explained the smaller local buildings of the period, and showed that they were still in their details Jacobean, with mullioned and transomed windows and label moulds and strings. It was only in a certain stiffness and formality in the arrangement of the parts that there was a difference from the work of the preceding period. Walkley Old Hall was an example of this. In remote districts, such as the Little Don Valley, Gothic details still lingered on, even until the early years of the XVIIIth century; and the porch of Midhope Church was an example of this. There was thus less than half a century in this district between the last of the Gothic work and the first building of the Gothic revival: the Ravenfield Church, designed in 1756 by John Carr, of York. During this period English garden design attained its greatest perfection under the influence of the great French garden designer, Le Notre, and the period was interesting as being that of the transition from the formal to the landscape school of gardening. The walled-in gardens and courtyards of Eyam and Derwent Halls were examples of the earlier idea; and the spacious garden at Sprotbro' Hall, which was built in the reign of Charles II., and was a fine example of the Restoration period. The great houses of the neighbourhood were naturally much purer in their style than the smaller, and Chatsworth House, designed by Talman, the rival of Wren, and the most important building erected in the neighbourhood during the period, was pure Renaissance, and exhibited no trace of Jacobean design It was difficult to realise that Eyam Hall was only a few years earlier in date than Chatsworth, but such is the case. At the end of the XVIIth century the people of Sheffield indulged in a new Town Hall. The accounts had been preserved by the Town Trustees, and the cost of the building appeared to have been about 300*l*. The hall stood at the church gates, across what now is the bottom of Church-street, and was pulled down a century ago. The doorway now preserved in Weston Park had been supposed, without any evidence, to have been the entrance of the hall. In this district during the period the use of timber-work for outer walls was given up, and in the south, where good building stone was not so plentiful, great advances in the use of brickwork were made under the influence of Sir Christopher Wren. The necessary rebuilding of London after the Great Fire of 1666 gave Wren his opportunity, and, in addition to St. Paul's Cathedral, halls of the City companies, and other buildings, Wren rebuilt fifty of the burnt churches. The lecturer concluded with a general description and analysis of these most interesting buildings, in which for the first time and with complete success the requirements of Protestant worship were met. The lecture was illustrated by lantern slides. At the conclusion, a hearty vote of thanks was accorded, on the proposition of Mr. E. M. Gibbs, seconded by Mr. J. B. Mitchell-Withers, and supported by Messrs. H. L. Paterson, J. W. Green, and the Chairman.

ENGINEERING SOCIETIES.

THE JUNIOR INSTITUTION OF ENGINEERS.—On Friday, January 26, Professor J. D. Cormack, B.Sc., delivered the hon. member's lecture before this Institution, taking for his subject "Notes on Boiler Trials." After pointing out the objects and uses of such trials, he set forth the requisite balance-sheet, and indicated the measurements, etc., necessary, and the chief statements to be made, proceeding to deal with the methods of starting, stopping, and conducting. Observation sheets and analysis of flue gases followed, and special reference was made to the system of conducting trials recommended by the Committee of the Institution of Civil Engineers. As a supplement to the lecture, a visit was paid on the following afternoon to the engineering laboratories of University College, Gower-street, where Professor Cormack demonstrated the methods of conducting a boiler trial, one being in progress at the time. All the various observations, measurements, and analyses necessary were shown. An interesting collection of calculating machines, etc., was exhibited by Professor Pearson, and Professor Fleming's electrical laboratory was also open to inspection. In the mechanical engineering laboratory the whole of the apparatus was on view and in operation. Although about one hundred visitors were present, the arrangements made by Professor Cormack were so admirably conceived and carried out that each member was enabled to see everything to great advantage. The thanks of the Institution to Professor Cormack for all that he had done to render the occasion so interesting were expressed by Mr. Geo. H. Hughes (member of Council).

WESTMINSTER CITY COUNCIL.

THE usual fortnightly meeting of this Council was held on Thursday last week, at the City Hall, Charing Cross-road, W.C.

Trade Union Rate of Wages for Employees.—The General Purposes Committee submitted a letter from the Lambeth Borough Council inviting the various borough councils to send delegates to a conference to be held at an early date at Lambeth Town Hall "with a view of framing and bringing into existence a uniform scale of trade union rate of wages and conditions for the employees in each department of the different borough councils." It was agreed to acknowledge receipt of the letter.

Subways at Charing Cross.—The Works Committee reported having had before them detailed plans of the subway for foot-passengers proposed to be constructed by the Baker-street and Waterloo Railway Company between the south side of Charing Cross, opposite the Phœnix Fire Office, and the company's station in Trafalgar-square. The Committee stated that the Council were to remove and reconstruct their underground public conveniences at Charing Cross to the west of their present site at the expense of the company. The plans were approved.

Street Improvements.—The Improvements Committee submitted a lengthy report dealing among other matters with the setting back of the building line in Horseferry-road (south side). It was agreed to purchase for a sum not exceeding 1*l*. per foot super. about 882 ft. of land, the property of the Ecclesiastical Commissioners, to provide for a widening of 45 ft. It was further agreed to ask the London County Council to contribute towards the cost.

The Committee also reported having received a letter from Mr. Mark H. Judge, Hon. Secretary of the "Further Strand Improvement Committee," forwarding copy of a memorial to the London County Council advocating a revision of the planning of the Strand, so that the roadway might have its natural course from St. Mary-le-Strand Church to the Law Courts, and requesting that the Council and the individual members of the Council should join in the memorial. It was agreed that no action should be taken in the matter.

Correspondence.

APPOINTMENT OF DISTRICT SURVEYORS.

SIR,—Referring to the letter from "District Surveyor" in your last issue, there are some points in it that I should like to be allowed to reply to.

If "District Surveyor" will trouble to read my letter again he will find nothing to indicate that I suppose "light and air" is regulated by the Building Acts; on the contrary, I refer to the overlapping of Acts. There are many conditions which under the Building Act might be allowed to exist, and to which a district surveyor would have no right to object, but which the law relating to "light and air" and the Public Health Act could prevent; this position I consider to be an unscientific condition of affairs and not as it should be. In my letter I was considering matters from the architect's point of view, and I submit that his position is the better one of the two, to allow an accurate opinion to be formed of the value of existing arrangements, than that of a district surveyor. An architect has to keep in view the requirements of his client as well as the Acts relating to building, light and air, public health, and the requirements of local authorities. The district surveyor has to attend only to the part relating to the Building Act, which is often of far less importance than is generally supposed, and in the same way the sanitary authorities have only to deal with the points governed by the Public Health Act, and so on. The architect may have six jobs in as many districts and finds that in each the officials have their own ideas as to how the various Acts should be interpreted, and it is quite pathetic at times to view the mental gymnastics they go through to try and support their pet fads.

I agree that there are architects and architects, but there are also district surveyors and district surveyors. When writing I had in my mind that an "architect" would be a man of experience in his profession and not of the "house-agent" type. May I remind your correspondent that architects existed before district surveyors, and it was the fact that a large and increasing number of buildings were being erected by builders and others without the aid of an architect that brought about such an undesirable state of affairs that it became necessary in the interests of the public at large that this condition should be altered—hence the appearance of district surveyors. If architects had in all cases been employed the reason for having district surveyors would never have arisen, and I consider the reasons apply now. There are many things about a building which, outside all artistic considerations, add to its improvement, about which neither the district surveyor or sanitary inspector has a voice, and if it was not for the architect would not be done.

With regard to the "blessing" to the public of having "district surveyors" who "are competent and experienced architects," all I can say is that no architect who is worth his salt depends on the district surveyor or sanitary inspector for help, as there is no occasion for him to do so. He is in a much better position to know what is necessary than either of them; and I can only liken it to a physician inquiring of a chemist and dentist for their opinion as to the right treatment for a child suffering from the mumps, as for the architect to be guided by the "blessings."

I am glad that "District Surveyor" admits the fact that "a very difficult Act has to be interpreted"; it is for that reason I advocate "a clear, simple, but thorough system" to take its place.

The system I suggested would not require the "poor unfortunate builder" to wait two months, as consent would be obtained before he would be invited to tender; there would be no reason for him to wait twenty-four minutes after signing a contract. Architects do not prepare their drawings after the work is started, so the supposed advantage of not having to wait more than twenty-four hours counts for nothing, to say nothing also about it being a very misleading line of argument. "District Surveyor" does not seem to recognise the amount of work that has to be gone through by the architect before the matter comes under the notice of the district surveyor.

In Scotland it takes about ten days to settle all questions relating to the Building Act, sanitary requirements, and the rights of the adjoining owners; this can all be done while the quantity surveyor is at work. There a two-months' notice is not required for party wall matters, nor a month for party fence walls; light and air questions, as we understand them, do not exist, as there one is not allowed to poach on his neighbours' rights. Having obtained consent, no power exists that can prevent the building being completed as approved. Think of that, ye architects in the first City of the world! and reflect upon the advantage it would be to you, to your clients, and to the appearance of London if such a state of affairs existed here; soon would London cease to be the place of mutilated conceptions. I have had a good many years' experience of this system and its workings in the "little towns" of Edinburgh, Glasgow, and other parts, and it leaves nothing to be desired.

It is the attitude taken up by "District Surveyor" and others of his way of thinking that accounts for the public being saddled with "a very difficult Act"; and I appeal to "District Surveyor"—if his mind is sufficiently open to admit that it may be possible (however remote) that places other than London exist where things may be managed better—to look into the question and become familiar with the subject.

I apologise for the length of this letter, but interest in my native city makes me anxious to see it sharing some of the improvements to be found in other parts. AN ARCHITECT.

Books.

Residential Flats of All Classes. By SYDNEY PERKS, F.R.I.B.A., author of "Party Structures," etc. London: B. T. Batsford. 1905.

WHILE the illustrations (209 in number) are undoubtedly the principal feature of this book, the text also is distinctly interesting and useful. The author has taken pains to gather together a representative collection of plans and views of British and foreign residential flats, and has redrawn nearly all the plans which have been reproduced. The first chapter is "Mainly Historical," and forms an appropriate introduction to the work. It is followed by chapters on "The Plan," "Artisans' Dwellings," "Different Classes of Flats—Comparison of Plans," "Practical

Notes," "Foreign Flats," "Financial Matters," and "Agreements." The last chapter might have been termed with greater propriety "an appendix," as it is merely a reprint of eight forms of agreement "in use for well-known buildings in London."

The fourth chapter, on different classes of flats, is the most important, and contains upwards of eighty illustrations of large and small flats, nearly all of which have been built in London. The author's notes respecting the plans are very brief, and adverse criticisms have been carefully avoided, for the obvious reason that, with the exception of one design by the author, all the plans of modern English flats have been lent to the author by other architects. The author's views can, however, be indirectly ascertained from the favourable remarks which are made in certain cases, and more directly from the chapter on "The Plan." The information on "Financial Matters" is useful and to the point.

Surely the entrance to the kitchen in Fig. 84 is not "through the larder," as stated on page 110, but through a lobby adjoining the larder, and in Fig. 87 the pantry is shown without a window, although one of the walls is an external one. The plan of the flats in Sloane-square (Fig. 112) is lettered "Amos F. Faulkner, architect," and the view (Fig. 112A) is given as the work of Mr. Mountford, but nothing is said in the text as to this collaboration. These, however, are trifling details, and we have pleasure in congratulating the author on having produced an interesting and useful book on an important subject. The publisher has carried out his part of the work with equal success.

The Law of Compensation, with Appendices of Forms, Rules, and Orders, etc. By ALFRED A. HUDSON, Barrister, assisted by H. E. MILLAR, W. A. PECK, and S. HUMPHRIES, Barristers. Two Vols. (London: The *Estates Gazette* Office and Sweet & Maxwell, Ltd. 1906.)

THIS book, one of great size—the two volumes contain, without the index, 1,597 pages—is interesting and valuable from its design; for the authors have endeavoured to place their subject before the reader to a certain extent in the form of a digest with illustrative cases. While the work has unquestionably been well and accurately done, the subject scarcely lends itself to this form of treatment; still it is work in the right direction, and, if not wholly successful in making the subject matter clear in places, no one can say that this new book on Compensation is not excellent. It may perhaps be useful to illustrate the character of the work. Under the Lands Clauses Act, 1845, on the subject of notice to treat we find the head—"When Notice to Treat is Unnecessary." This is followed by (a) "as to yearly tenants," as to whom a cross-reference is given, and then by (b) "No notice to treat need be given when the promoters of the undertaking and the owners of the interest in the lands have entered into an agreement to refer the question of compensation for determination by an arbitrator." This statement of the law is made clear by an illustration embodied in the case of Collins *v.* The South Staffordshire Railway, the facts of which are concisely stated in small type. Unquestionably, so far as cases are concerned, this illustrative method is more satisfactory than the usual practice of placing at the foot of a page a number of decisions as authorities in an unselected state. On the other hand, the difficulty of obtaining true legal dicta out of a mass of technical statutes is very difficult. But though, as we have said, the result of the courageous attempt is not altogether satisfactory, this arises not from want of knowledge or ability on the part of the authors but, from the inherent difficulty and intricacy of their subject.

Axel Herman Haig and His Work. By E. A. ARMSTRONG. (London: Fine Art Society. Ltd. 1905.)

TO SPEAK truth, the appearance of this work comes rather as a surprise to us, seeing that the popular artist himself is alive, his works still in request, and that they are not of a nature to require a learned critique for their exposition or appreciation. The Fine Art Society, we remember, organised, not so long ago, a special exhibition of Mr. Haig's now well-known etchings, and the result of this exhibition has doubtless prompted the Society to issue a popular book on the etchings and the etcher.

As a biography Mr. Armstrong's book is not enthralling; for Mr. Haig's life has not been so full of incident, nor the artist himself so celebrated as to make it so; indeed, his training was just what any intelligent student of his work would suppose it to have been; but he has been widely appreciated, and to both dealer and collector he has so far proved to be a commercial success.

As an artist Mr. Haig is rather difficult to place. He can draw "mighty well," as Pepys would have said. His water-colours are agreeable, his pencil studies charming, his etchings interesting, and, at the same time, perplexing. Yet all his work lacks that "something" which, because indefinable, it seems nowadays almost affectation to allude to. As etchings, we confess to preferring (among the moderns) those of Whistler or of Mr. Brangwyn. Nevertheless, Mr. Haig produces—it cannot be denied—many admirable effects. He has a fine, if somewhat theatrical, sense of black and white and of composition; but we think that his aims would have been better expressed in mezzotint, and we are fortified in our opinion by observing how often his actual methods are those of the mezzotinter rather than of the etcher.

After all, Mr. Haig's reputation will probably rest on his skill as an architectural draughtsman, and this skill seems, to our mind, to be more charmingly displayed in his pencil drawings and studies than in either his water-colours or his widely-circulated etchings. Of the pencil drawings illustrated in Mr. Armstrong's book that of "Rheims Cathedral Under Repair" is the best. It is certainly finer and shows more concentration in black and white than does the pretty drawing of an old Hamburg street (reproduced opposite p. 38). Compared to either of these drawings however, that of Leon Cathedral (p. 137) appears excessively dull, hard, and lifeless, besides exhibiting, as do most of the Eastern studies, that worst of engraver's faults—a tiresome, unrestrained record of the pettiest detail, irrespective of its place and worth in the whole composition. The drawing of the Piazza San Marco, however, captivates us in spite of this defect, and is a good example of Mr. Haig's treatment of figures as a real part of his picture, and not as a finishing touch to an academic builder's drawing.

We have only to add that Mr. Armstrong's book is well printed, and that its descriptive list of engravings should prove useful to collectors of Mr. Haig's work.

The Writers' and Artists' Year Book: 1906. London: Adam & Charles Black.

THIS is a small kind of directory "for writers, artists, and photographers." Its chief value is in its list of magazines and periodicals, with brief indications of the nature of their contents, and (in some cases) of the kind of articles from outsiders which may have a chance of consideration. There are also lists of publishers (English and American), colour printers, and literary agents. The advice to would-be contributors, added in the case of several periodicals, "a preliminary letter is advisable," should have been added also in the case of the *Builder*. We do not accept any contributions without knowing something about the writers first, and correspondents have often given themselves unnecessary trouble by sending us articles, good in themselves, on subjects which had already been fully treated in our pages.

Dilapidations: a Text-book in Tabulated Form. By Professor BANISTER FLETCHER. Sixth Edition. Revised and largely rewritten by BANISTER F. FLETCHER, F.R.I.B.A., and H. PHILLIPS FLETCHER, F.R.I.B.A., Barrister. (London: B. T. Batsford. 1906.)

THE fact that this book has reached a sixth edition renders comment on its material or form unnecessary. It contains a great amount of information, accurately stated, in a very small compass. We suggest, however, that in the next edition an extract from an article in the *Saturday Review* (p. 67) might be left out. We have some doubt also whether it is desirable to include in this book such parts of the Agricultural Holdings Act as apply to purely agricultural details.

Fifty Years Ago.

FROM THE *Builder* OF FEBRUARY 2, 1856.

ON THE PAST AND PRESENT CONDITION OF THE THAMES.

INSTITUTION OF CIVIL ENGINEERS.—At a meeting on January 22, Mr. Robert Stephenson, M.P., President, in the chair, the paper read was "On the Past and Present Condition of the River Thames," by Mr. H. Robinson.

Some of the principal statistical facts connected with the river having been enumerated, the numerous shoals now exposed at low tide, the mud-banks covered with putrefying matter and animalculæ, the disgusting state of the water itself, the numerous crazy wood-propped wharfs, and the rickety barges still serving for steam-boat piers, were referred to, as justifying the opinion that, were it not for the noble bridges spanning it, the Thames, within the limits of the metropolis, would be a disgrace at home and a reproach abroad, and it was remarked that in no town in the world was there a noble river so neglected and deformed.

The various schemes for embanking the shores were then alluded to, and the partial good already effected was noted. Among the larger designs were those of Sir Christopher Wren, Mr. Martin, Messrs. Walker & Burgess, and others. The removal of the obstruction of Old London Bridge had seriously altered the condition of the river at or near low tide, not only by exposing shoals, which impeded the navigation, and, by leaving a very large surface of mud, giving off exhalations dangerous to health, but also by so quickening the current as to enable it to scour away the bottom near to the foundations of structures built in the channel, and thus seriously endangering several of the bridges and wharfs.

The various causes which had induced the present polluted condition of the Thames were described to be, first, the demand made upon it to serve as a town sewer as well as a land drain. This would, however, have been of little moment if London had been beyond the influence of the tide, so that the stream could have run always in the same downward direction; but, exposed as the river was to the ebb and flow of the tide, the impurities and sewage, which had been discharged into the ebbing tide, were again brought back by the flood. Nor was this all: in consequence of the low level of a considerable part of the London sewers, the sewage was necessarily stopped back for many hours, and egress could not be afforded until the water had fallen considerably; the consequence of this was, that it was only during a portion of the ebbing tide that the sewage was enabled to travel down the river, but it was returning upwards during the whole period of the flood tide, so that the impurities not only returned to the place whence they started, but were even carried higher up; and it was asserted that some of the putrefying matter, exhaling pestilential odours on the mud-banks in Westminster, was actually discharged from sewers at Bermondsey or Southwark.

Illustrations.

SEDILIA, SIENA CATHEDRAL.

THIS carved walnut screen upon the right side of the altar in Siena Cathedral dates from about 1670, and is used only by the officiating clergy during the ceremony of singing mass. The figures surmounting the upper portion are all represented as singing, with the central figure holding a chalice; the lower panels being filled in with carving representing various vestments and utensils used during this ceremony. The central coat of arms is, I believe, that of the Piccolomini.

The walnut has become a particularly rich colour with a fine polish. The central perforated carved panels are in rosewood.

An original sketch for these sedilia, very black and partly wanting, is still to be seen in the museum connected with the cathedral.

L. U. G.

WORKING MEN'S COLLEGE, CAMDEN TOWN.

THESE buildings have been erected to form a new home for the college, which has just celebrated its jubilee since its foundation, by Frederick Maurice, in Great Ormonde-street, in 1854. The old premises, which are fine examples of Queen Anne work, and which, it is hoped, may be preserved as such, have passed to the Children's Hospital.

The new building has been designed of a very simple character, fitted to its purpose. It contains a great hall, common-rooms, club-rooms, gymnasium, science schools (for simple teaching), classroom, museum, and library.

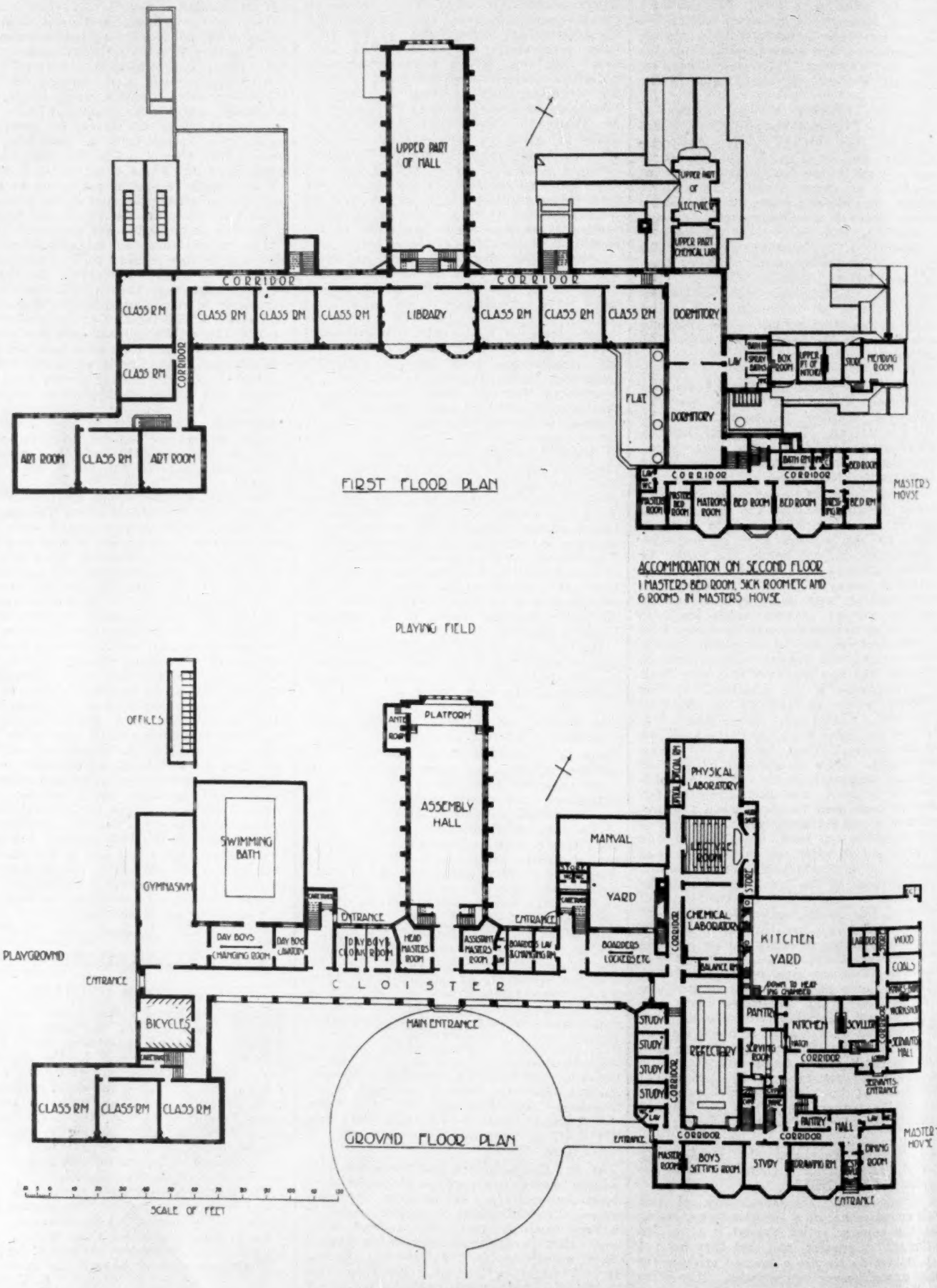
As an education on the literary side is a feature of the college teaching, special attention has been devoted to the library. This and the hall form the block seen on the right-hand side of the illustration.

The general contractors were Messrs. W. Johnson & Co., of Wandsworth; for the heating, ventilation, and electric lighting, Messrs. Wippell Brothers & Row, of Exeter. Mr. W. D. Carõe is the architect.

Should there be any intention of demolishing No. 44, Great Ormonde-street, it would be most valuable that a record should be kept. It contains many features of beauty and interest. W. D. C.

GRAMMAR SCHOOL, LINCOLN.

THE new buildings for the Lincoln Grammar School, illustrated this week, are being erected on a large open site to the east of the cathedral, Mr. Charles Wright, of Leicester, being the contractor. Ancaster stone is being used in conjunction with some specially-made local facing bricks of a greyish



The Grammar School, Lincoln. Plans.

would be
d be kept.
eauty and
V. D. C.

COLN.
coln Gram-
are being
he east of
Wright, of
Ancaster
with some
f a greyish

SEDI
OF·T
S

PEW

FULL·SIZ
OF·CORNIC

SECTION·A·

Lionel·U·Grace 1904.

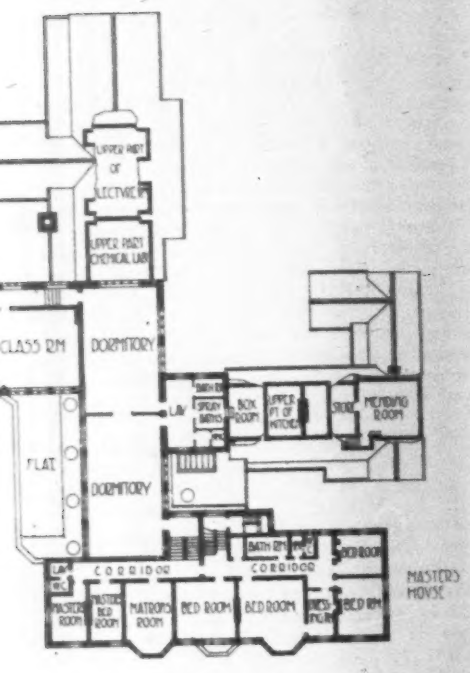
INK PHOTO SPRAGUE & Co LTD 4 & 5 EAST HARDING STREET, FETTER LANE, E.C.

No. 44, Great Ormonde-street, it would be most valuable that a record should be kept. It contains many features of beauty and interest.

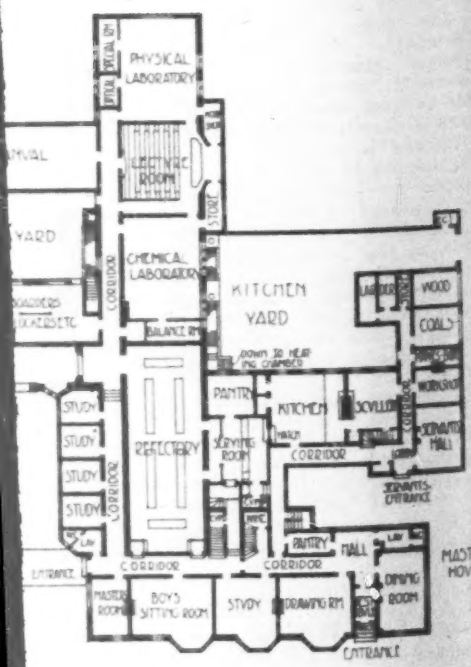
W. D. C.

GRAMMAR SCHOOL, LINCOLN.

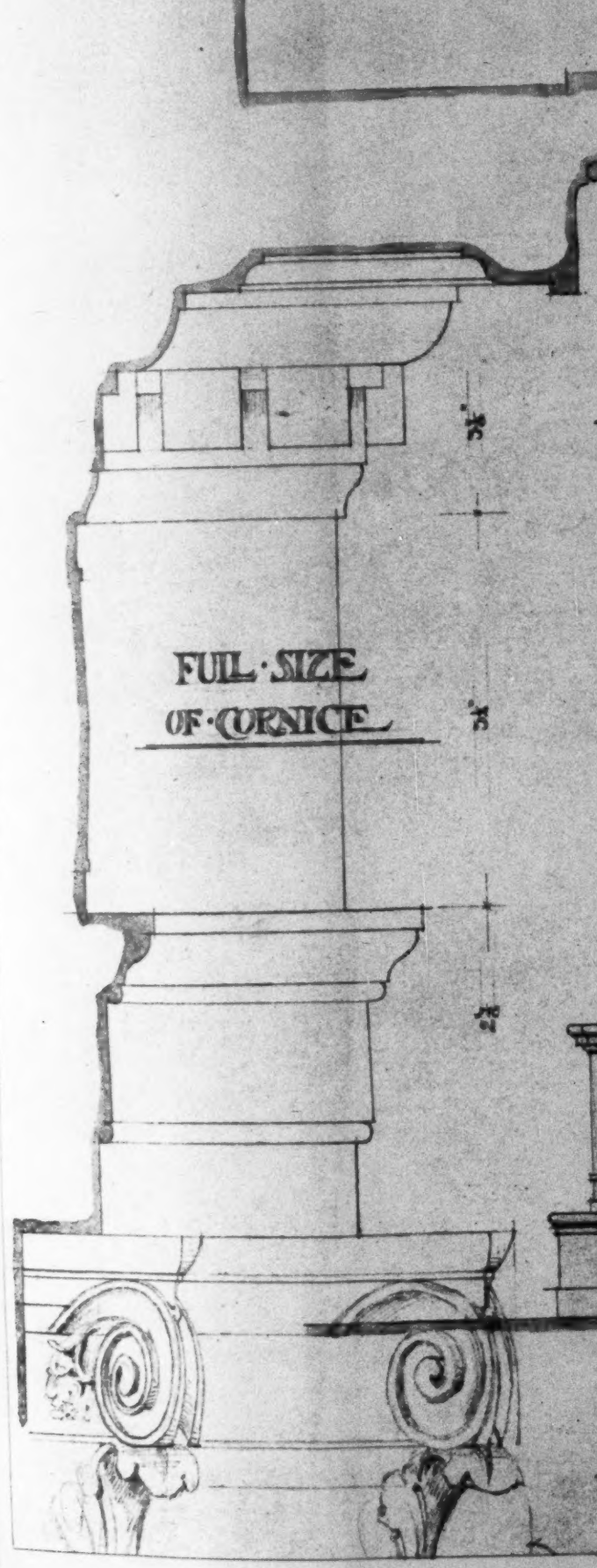
THE new buildings for the Lincoln Grammar School, illustrated this week, are being erected on a large open site to the east of the cathedral, Mr. Charles Wright, of Leicester, being the contractor. Ancaster stone is being used in conjunction with some specially-made local facing bricks of a greyish



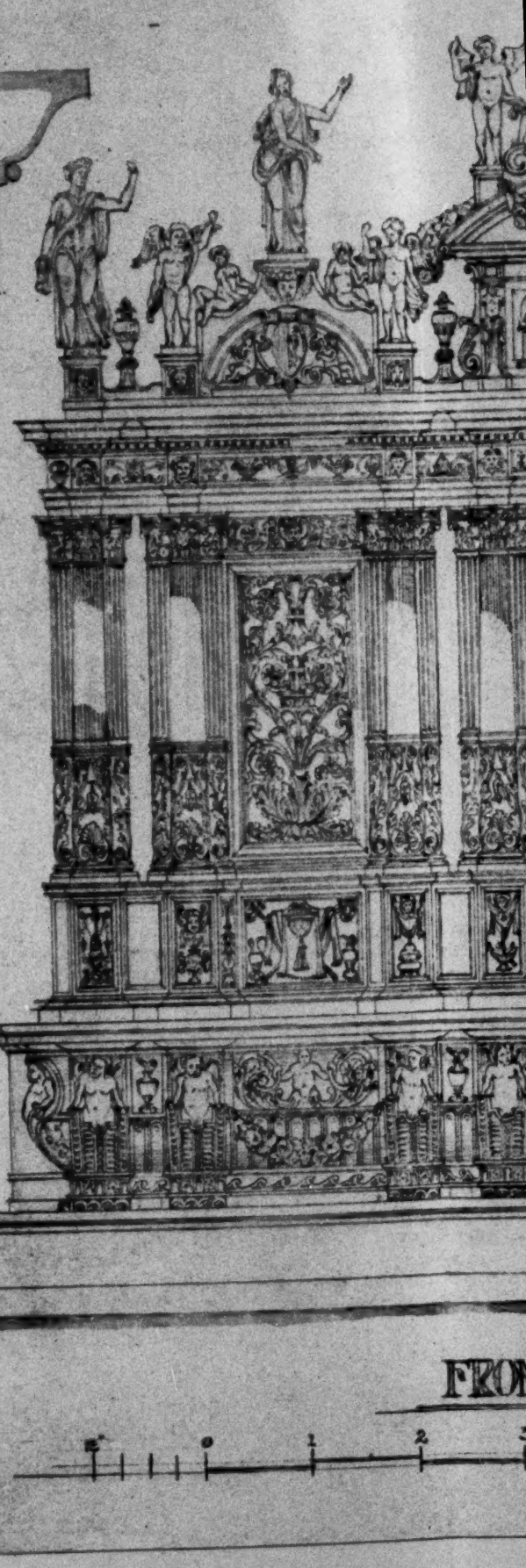
ACCOMMODATION ON SECOND FLOOR
1 MASTERS BED ROOM, SICK ROOM ETC AND
6 ROOMS IN MASTERS MOVSE



SEDILIA · FOR · CELEBRATION OF · THE · MESSA · CANTATA · SIENA · CATHEDRAL

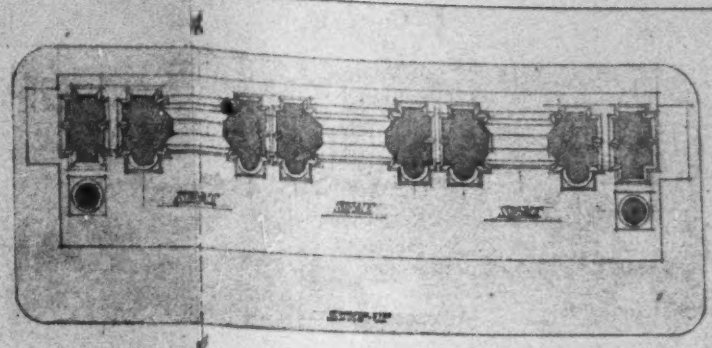


FULL · SIZE OF · CORNICE

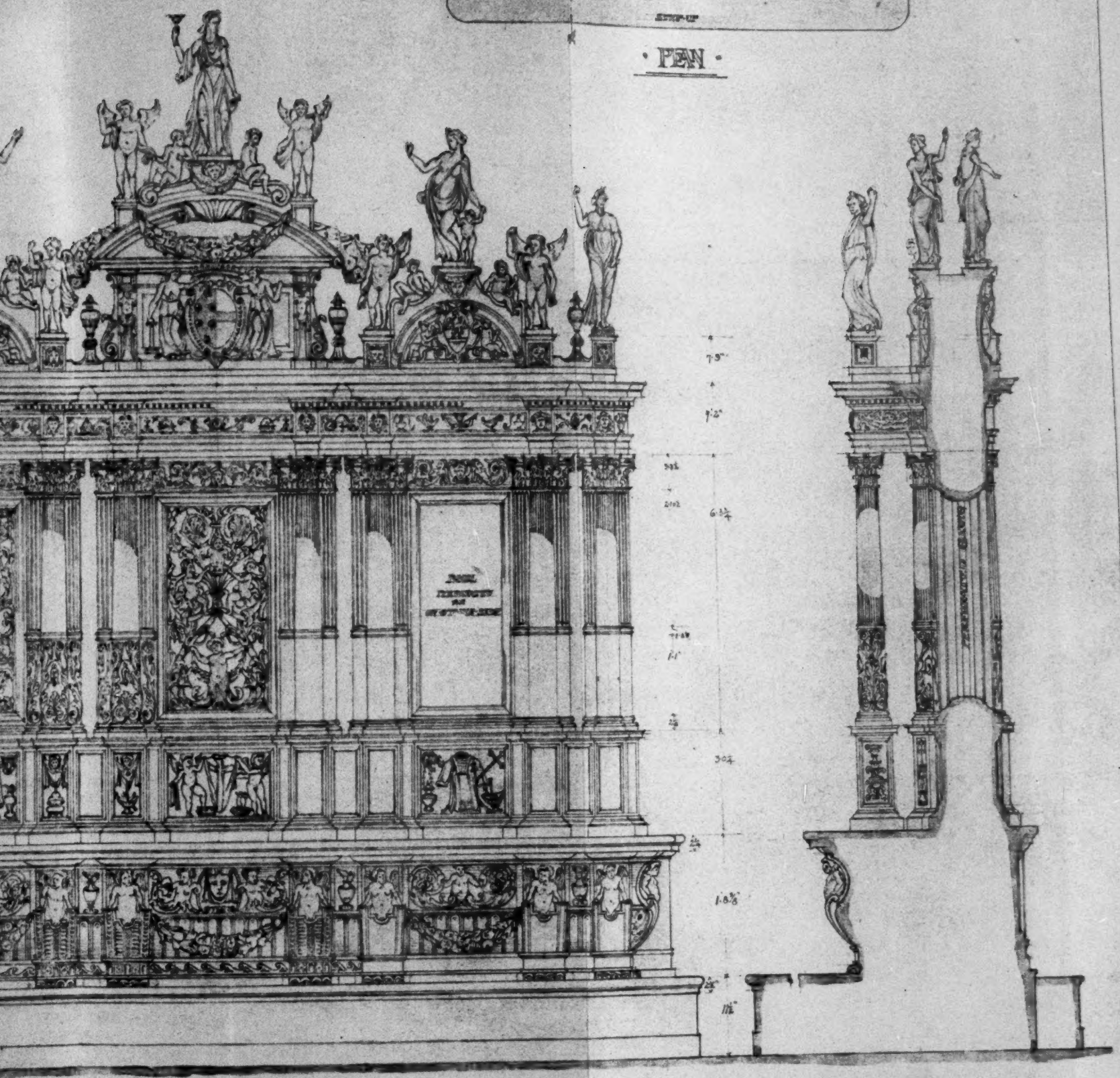


FRO

0 1 2



PEN



FRONT ELEVATION

SECTION A

Lionel U. Grace 1904.

INK PHOTO. SPRAGUE & Co. LTD 6 & 8 EAST HARDING STREET, FETTER LANE, E.C.

WORKING MEN'S COLLEGE.

· CAMDEN TOWN ·

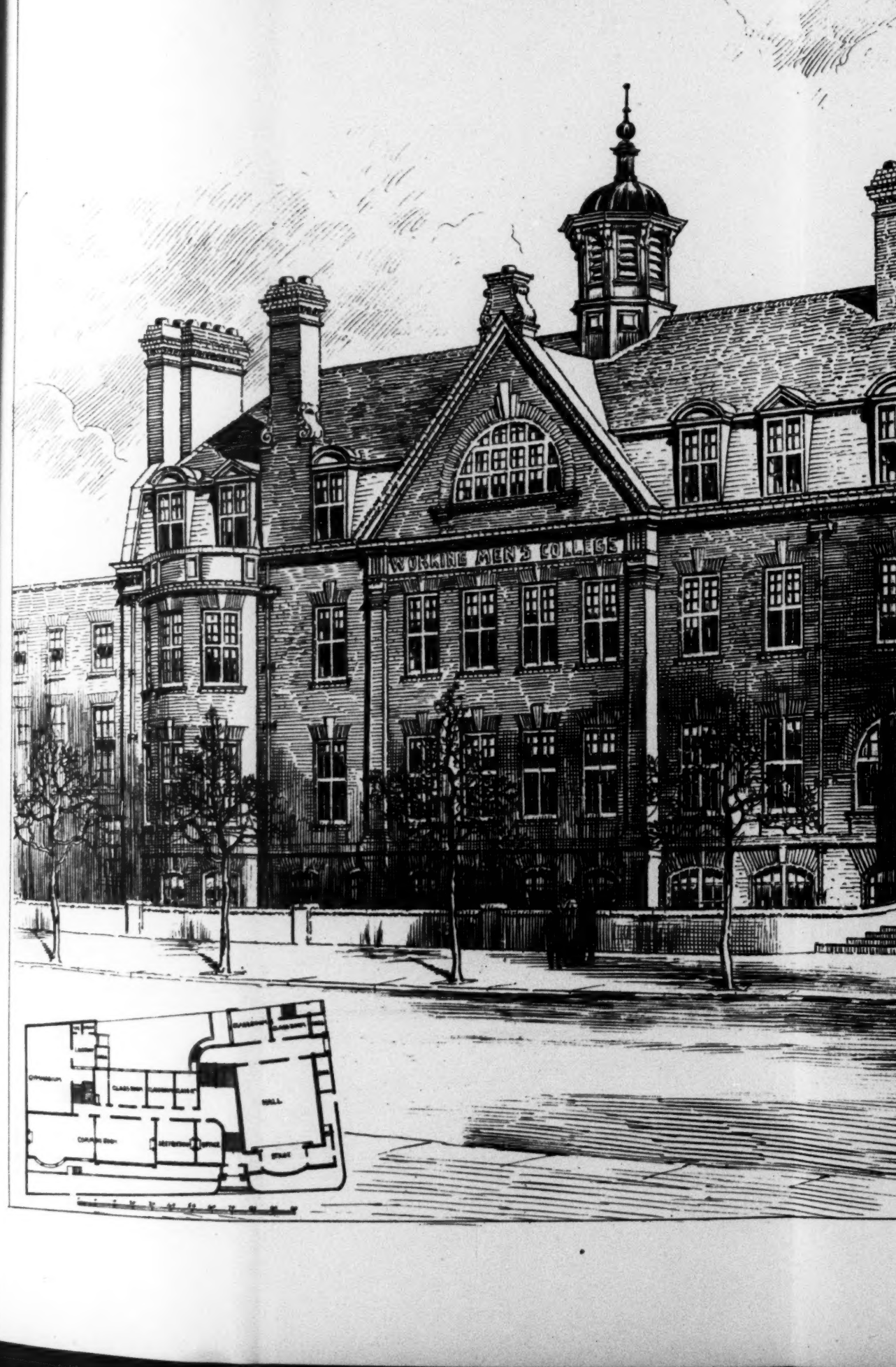
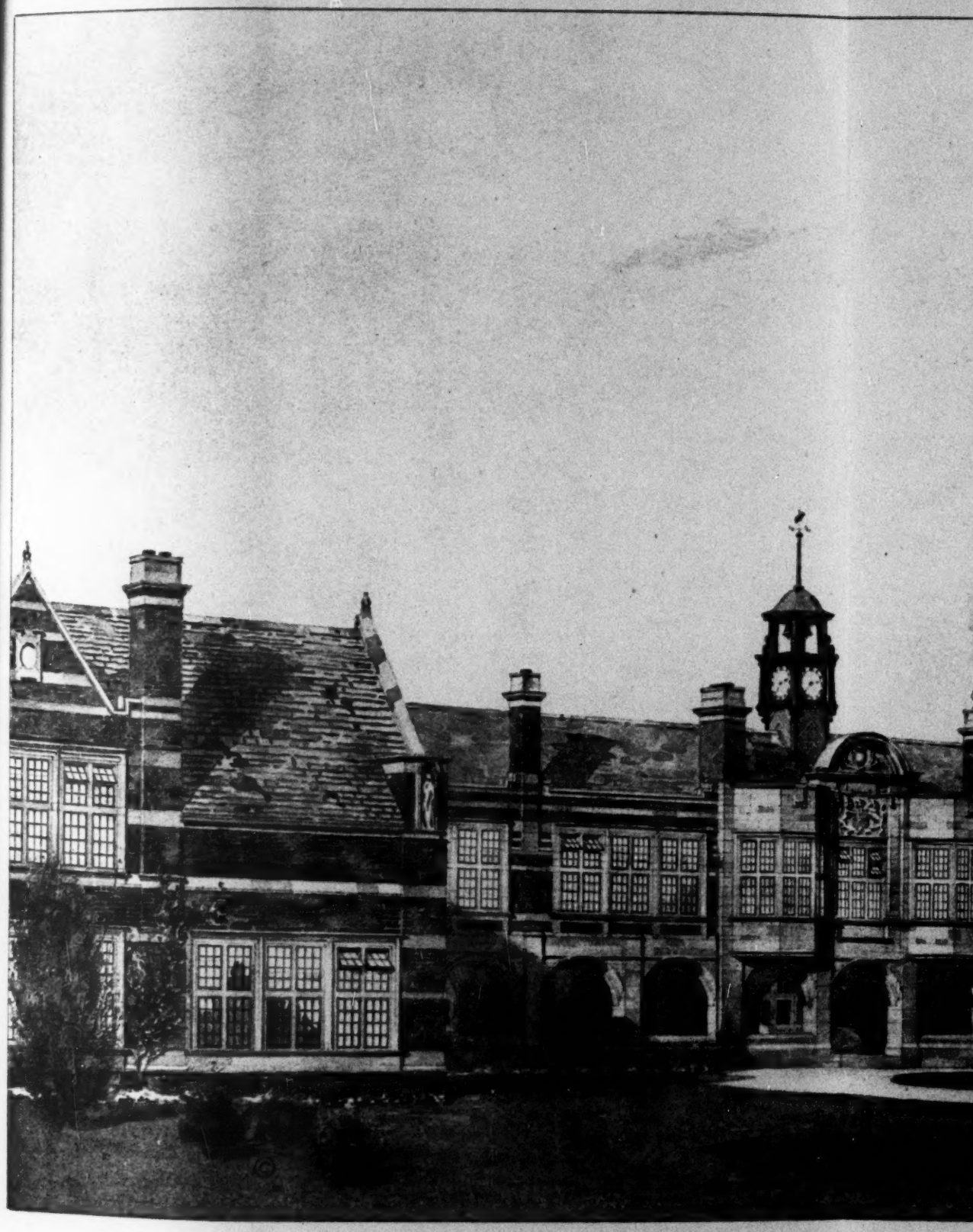


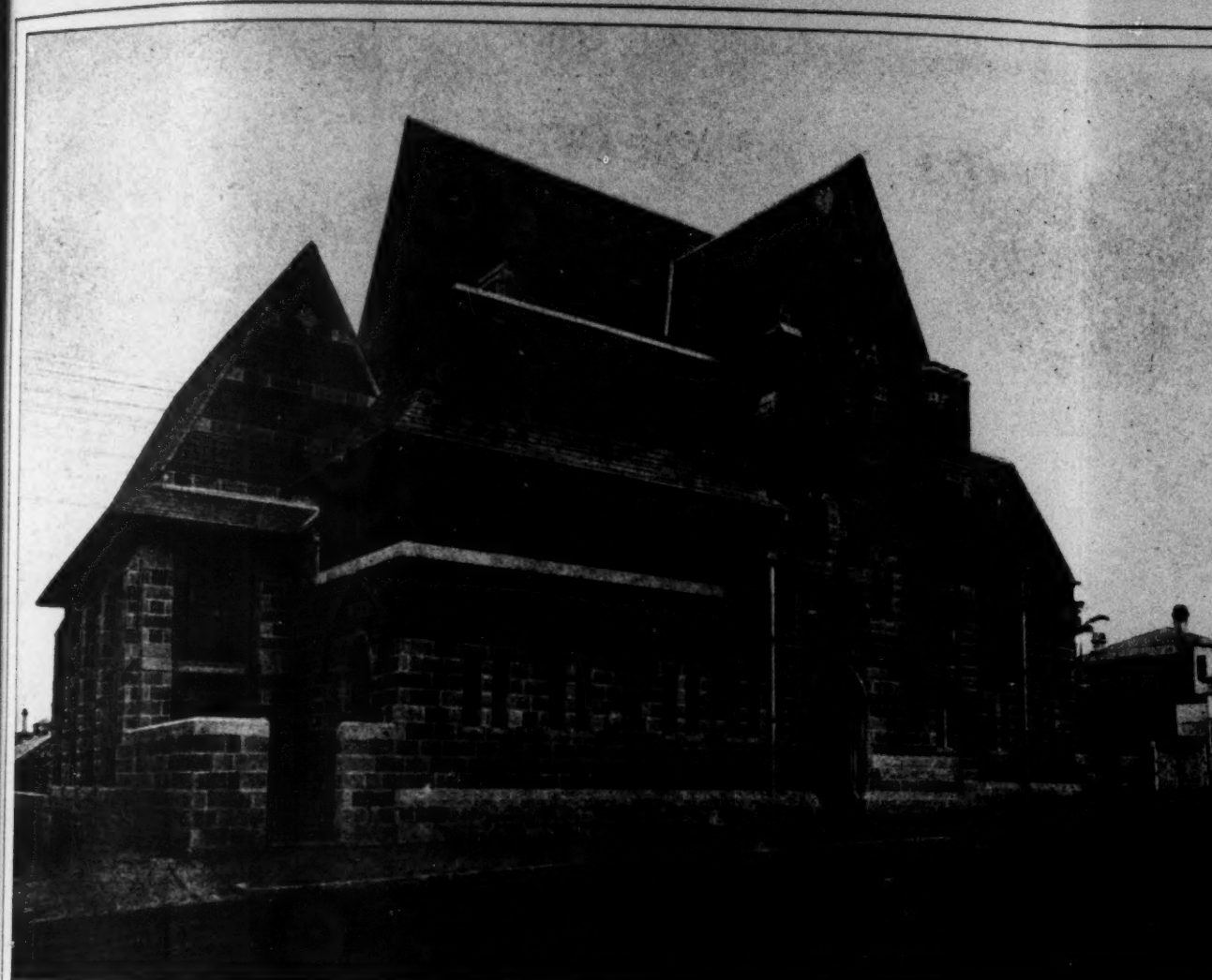
PHOTO-LITHO. SPRAGUE & Co LTD 4 & 5, EAST HARDING STREET, FETTER LANE, E.C.



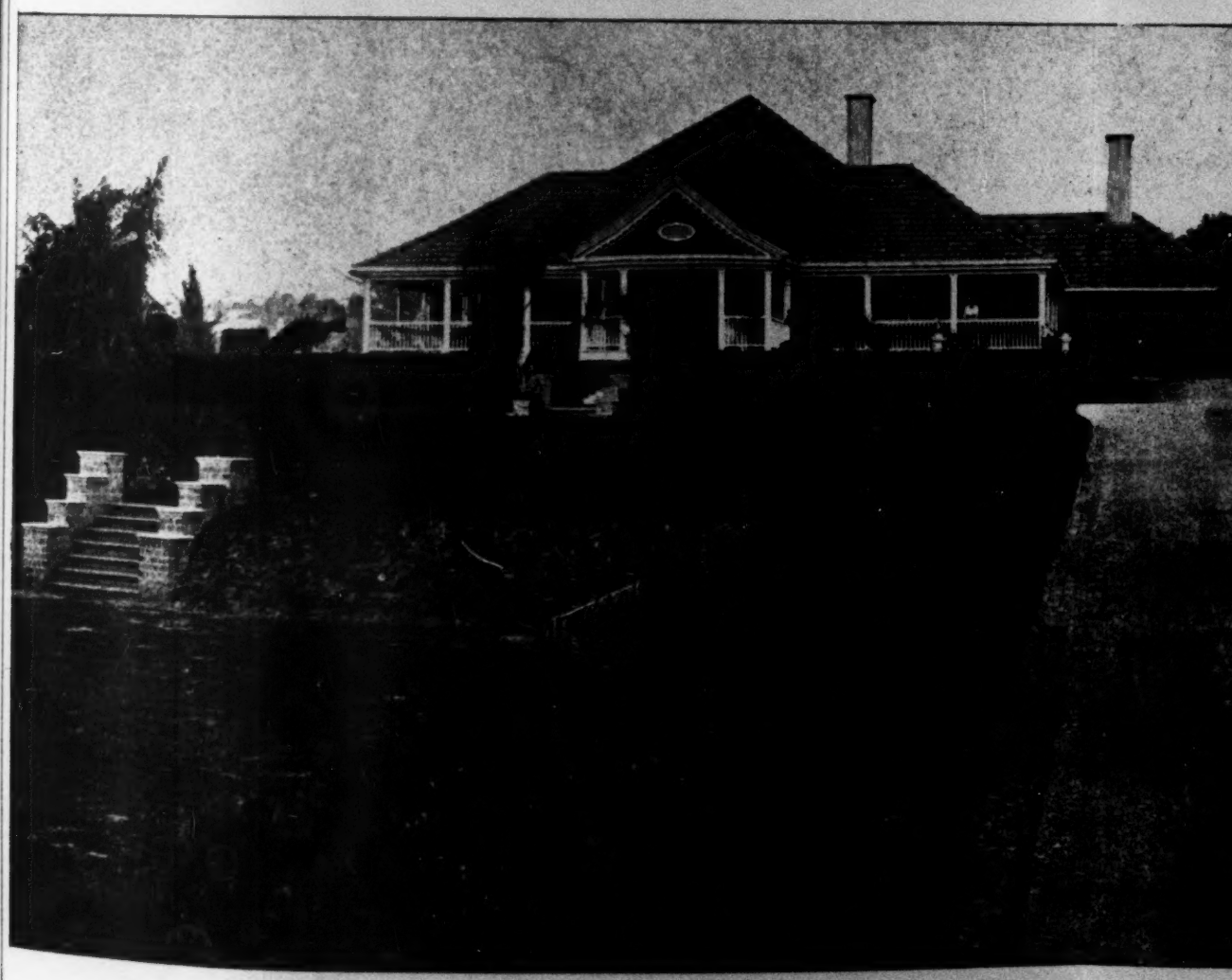
THE GRAMMAR SCHOOL, LIN

INK-PHOTO SPRAGUE & Co LTD 4 & 5 EASY HARDING STREET FETTER LANE E.C.

MMAR SCHOOL, LINCOLN.—Mr. Leonard Stokes, F.R.I.B.A., Architect.



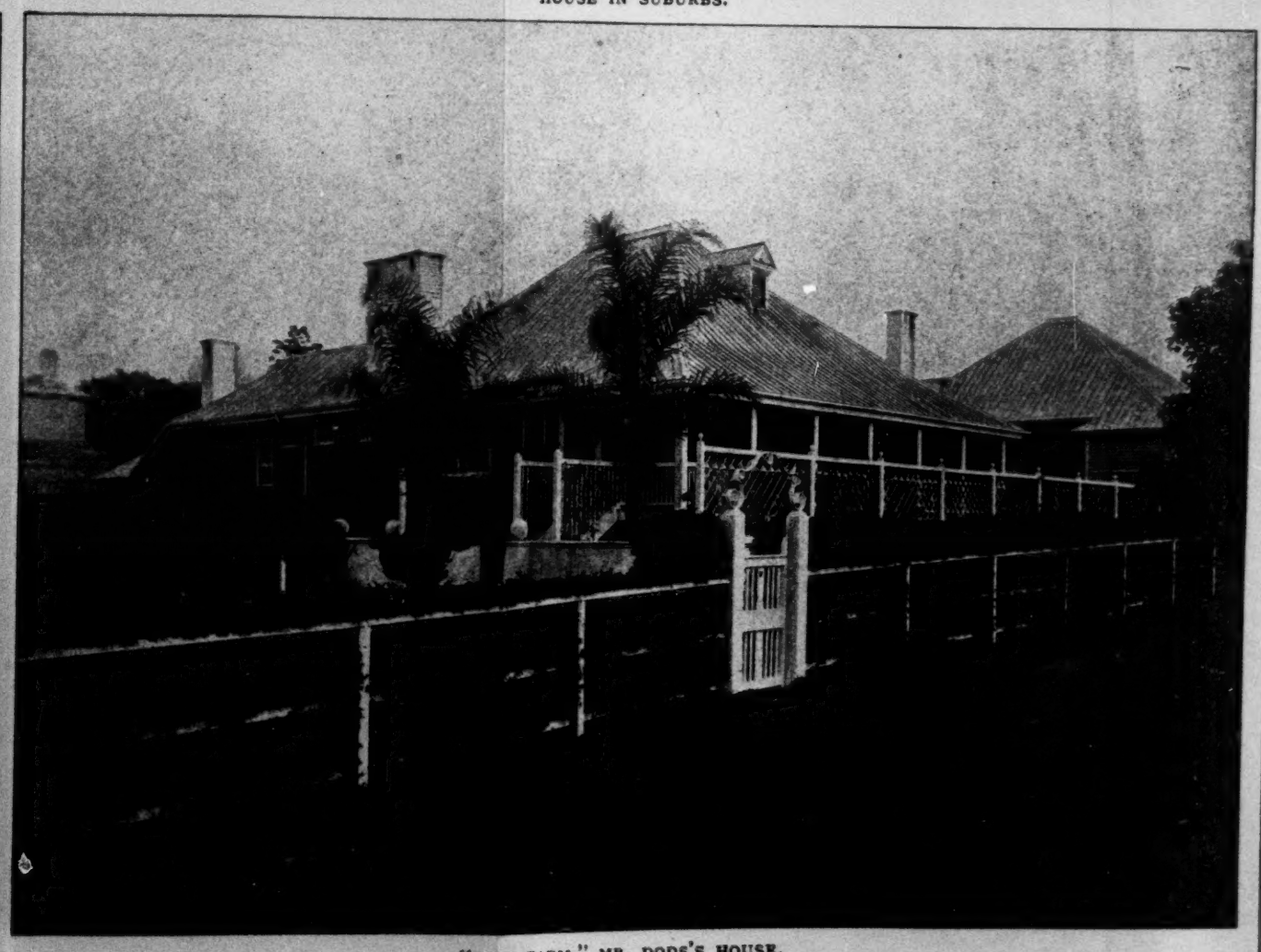
ST. JOHN'S SCHOOLS.



HOUSE IN SUBURBS.

SCHOOL AND HOUSES AT BRISBANE.

HOUSE IN SUBURBS.



"NEW FARM," MR. DODS'S HOUSE.

"INK PHOTO." SPRAGUE & Co. LTD 4 & 5 EAST HARDING STREET, FETTER LANE, E.C.

SES AT BRISBANE, AUSTRALIA.—MESSRS. HALL & DODS, ARCHITECTS.

colour,
master's
being u
proper
The i
Royal A
architec

SCHO
Or th
we beli
materia
pulled
cathedr
the late
example
the ne
from th
other t
stand a
dous ha
hailston
crack s
The
of Bris
was w
three
bered

BRA
The re
Cross,
tive de
West C
Counci
assesso
the me
regard
(c) to
The f
Messra
premiu
Goldsm
premiu
Crouch
Guy w
design
the le
With
report

THE
G. Ba
versit
BUI
By E
2s. 6d
ARC
IN
(B. T
THE
BOUR
(B. T
DI
Sixth
ELE
IT CA
Marsh
LA
Eight
& Co

THE
send
work
As p
now
obvio
exam
but,
befo
opini
howe
prov
devi
land
the
brea
into
stop
exce
the
illus
popu
inte
T
us

colour, with red brick dressings to the master's house instead of stone, the latter being used as dressings to the school house proper only.

The illustration was exhibited in last year's Royal Academy. Mr. Leonard Stokes is the architect.

SCHOOL AND HOUSES, BRISBANE.

Of the buildings illustrated, the school is, we believe, built to a great extent from the materials of the old church, which has been pulled down to make way for the new cathedral, to be erected from the designs of the late Mr. Pearson. The three houses are examples of the type of suburban house of the neighbourhood. One of them appears from the drawing to be tiled or slated; the other two have iron roofs, which we understand are necessary in view of the tremendous hailstorms experienced there, where the hailstones are large and heavy enough to crack slates with their impact.

The architects are Messrs. Hall & Dods, of Brisbane. Mr. Dods, the younger partner, was working in London offices for two or three years recently, and may be remembered by some of our readers.

COMPETITION.

BRANCH LIBRARY AT WEST GREENWICH.—The report of the assessor (Mr. A. W. S. Cross, M.A., F.R.I.B.A.) on the competitive designs sent in for the Branch Library at West Greenwich to be erected by the Borough Council was made known on Monday. The assessor stated that he had carefully weighed the merits and demerits of each design with regard (a) to its plan, (b) to its architecture, (c) to its probable cost of construction. The first premium of 25*l.* was awarded to Messrs. Wills & Anderson, the second premium of 15*l.* was awarded to Mr. Henry Goldsmith (Manchester), and the third premium of 10*l.* went to Mr. Henry A. Crouch. A design sent in by Mr. Albert L. Guy was placed next in order of merit. The designs will be placed on public exhibition in the lending library for a limited period. With the designs will be exhibited a critical report by Mr. Cross.

BOOKS RECEIVED.

THE CARE OF ANCIENT MONUMENTS. By G. Baldwin Brown, M.A. (Cambridge University Press.)

BURT'S RAILWAY RATES TIMBER TABLES. By E. A. P. Burt. (William Rider & Son. 2s. 6d.)

ARCHITECTURAL SKETCHING AND DRAWING IN PERSPECTIVE. By H. W. Roberts. (B. T. Batsford. 7s. 6d.)

THE MODEL VILLAGE AND ITS COTTAGES: BOURNVILLE. By W. Alexander Harvey. (B. T. Batsford. 8s. 6d.)

DILAPIDATIONS. By Banister Fletcher. Sixth Edition. (B. T. Batsford. 6s. 6d.)

ELECTRIC POWER: WHAT IT IS, AND WHAT IT CAN DO. By A. W. Marshall. (Percival Marshall & Co. 3d.)

LAXTON'S BUILDERS' PRICE BOOK FOR 1906. Eighty-ninth Edition. (Simpkin, Marshall, & Co. 4s.)

TRADE CATALOGUES.

THE Titan Lift and Electric Company send us a pamphlet describing electric lifts worked on the Titan push-button system. As practically all forms of lift makers have now adopted this method of control, there is obviously nothing new in this particular example, except the details of construction, but, as these are not detailed in the pamphlet before us, it is impossible to pronounce any opinion upon their merits. We may mention, however, that the Titan lift is stated to be provided with all the latest and best safety devices, including automatic safety locks for landing and cage doors, a powerful brake on the motor shaft, and a special type of circuit breaker attached to the gear, which comes into operation if the descending cage is stopped by any hindrance, if the speed exceeds a certain limit, or if the cage passes the normal highest or lowest point. The illustrations in this pamphlet, being of popular character, are not of particular interest to technical readers.

The New Expanded Metal Company send us the fifth edition of their handbook of practical tests and tables relating to the employment of expanded steel in concrete and plaster work and in fire-resisting and building construction generally. We have referred on many previous occasions to the distinctive qualities and varied uses of expanded metal, and for this reason it is not now necessary to discuss these points. The handbook contains 170 pages, with numerous drawings and photographic views illustrating the application of expanded metal in architectural and engineering practice. A noteworthy feature is the extended use that is evidently being made of the material as a constituent of concrete-steel, a purpose for which it is admirably adapted. Much of the matter in this edition has come before the notice of our readers in previous issues, but several newly-executed works are now described, and much additional information is given in the letterpress. One thing lacking is a more complete index, for the solitary page allotted to this detail does anything but justice to the comprehensive collection of useful information presented in the book, which ought to find a place in the office of every architect and engineer.

Messrs. Gittins (Birmingham and London) send us a small pamphlet of designs for gas and electric fittings, which we have pleasure in being able to praise unreservedly. They are in the best possible taste; there is none of the effort to be "ornamental" which we see in so many of such illustrated lists; they are all quite simple in line and detail, but the forms are graceful and well considered, and such as to be satisfactory to the eye of an artist. We may commend especially the electric light bowl fitting (E 101A); the electric light pendant in wrought brass (E 89); the outside lantern (G 112); the bronze gas pendant (G 131); the wrought brass bracket lamp for incandescent gas or acetylene (G 126), and the electric light lantern pendant (E 105). Judging from this booklet, those who wish to furnish their houses with electric light or gas fittings in good taste, without going to the expense of getting them specially designed, could not do better than select from Messrs. Gittins's stock.

The General Electric Company send us a small illustrated catalogue of their electric glow radiators for domestic heating. We have every sympathy with this method of warming rooms, which is almost an ideal one where expense is not a first consideration; not that the radiators here shown are expensive in themselves, as first cost, but the expense of keeping a house warmed by electricity is at present prohibitive except for the wealthier classes. But why do not the General Electric Company employ someone who is an artist in metal work to design radiators for them? They show one, for instance, described as "a very ornamental type" (No. 1,300), which we can assure them no artist would have in his house at a gift; it is the worst thing in the collection; and some others—1,280 and 1,292, for instance—are nearly as bad. Nos. 1,542, 1,545, and 1,553 are much better, and seem to have been designed by someone with a feeling for the treatment of metal work; it is a pity they do not all show these characteristics. The two in fire-proof wood (1,324, 1,330) are suitable and pleasing, at least there is nothing in them to offend the taste; but such a design as No. 1,300 is enough to frighten architects off at the first glance.

The Student's Column.

SOME MATHEMATICAL METHODS AND USEFUL DATA FOR ARCHITECTS.—IV.

Numerical Definitions.

HAVING dealt sufficiently with the general nature of numbers and systems of notation and numeration, we will now define and consider briefly the different kinds of numbers frequently occurring in arithmetic, and other numbers to which reference is made by mathematical writers.

For the convenience of students we deal with the present section of our subject in the form of an alphabetically arranged series of definitions, which will be available and suitable for subsequent reference.

After each of the definitions such illustrations and examples are given as appear necessary to make clear the nature and use of the numbers included in the category.

Numerical Definitions.

Abstract number.—Any number whose properties are considered without application to or connexion with any concrete quality or thing. The same as *numerant* number, and the converse of an *applicate*, *concrete*, or *numerate* number (*q.v.*).

Example: When used without qualification, as 1, 5, 7, 20, numbers are regarded as *abstract*.

Abundant number.—A number, the sum of whose aliquot parts is more than the number itself.

Example: 18 is an abundant number, as the sum of its aliquot parts $(1 + 2 + 3 + 6 + 9) = 21$.

Algebraic number.—A root of an algebraic equation having whole numbers as coefficients.

Example: $2 + \sqrt{2}$ is a root of the equation $x^3 - 5x^2 + 6x - 2 = 0$.

The height of an *algebraic* number is its position in any arrangement of such numbers.

Aliquot part.—A number forming part of a larger number and capable of measuring it without remainder.

Example: 3 is an aliquot part of 24.

Alternate numbers.—(1) The even and odd numerals form two series of *alternate* numbers.

(2) The term is also applied to units such that the sign of the product of any two is changed if the order of the factors be reversed. These units are not really numbers, but algebraical symbols, sometimes called *Hankel's numbers*.

Example: $ab = -ba$.

Amicable numbers.—Any pair of numbers each one of which is equal to the sum of the aliquot parts of the other.

Example: The aliquot parts of 220 are: $(1 + 2 + 4 + 5 + 10 + 11 + 20 + 22 + 44 + 55 + 110) = 284$; and the aliquot parts of 284 are: $(1 + 2 + 4 + 71 + 142) = 220$.

Antilogarithm.—The *natural* number corresponding to any *logarithm* (see *artificial* number).

Applicate number.—A number applied or used with reference to some concrete quality or thing. The same as a *concrete* or a *numerate* number (*q.v.*) and the converse of an *abstract* or *numerant* number (*q.v.*).

Example: 1 house, 5 tons, 7 yards, 20 inches.

Articulate number.—A power of ten or a number consisting of tens.

Examples: $10 (= 10^1)$, $40 (= 4 \times 10)$, $100 (= 10^2$, or $10 \times 10)$.

An *article* is the number 10, or any number ending with 0.

Artificial number.—A number derived from the series of ordinary numbers. Among *artificial* numbers are *logarithms*, *Bernoullian* numbers, *diametral* numbers, *Euler's* numbers, *figurate* numbers, etc. (*q.v.*).

Bernoullian numbers.—A special series of numbers originated by Jacob Bernoullian. (Only used in abstract mathematics.)

Binary number.—One composed of two units.

Cardinal number.—Any one of the series 1, 2, 3 and upwards in contradistinction to 1st, 2nd, 3rd and upwards, the latter being *ordinal* numbers (*q.v.*).

Cipher.—The symbol 0, denoting *nought quantity*, and occupying a neutral position between positive and negative reckoning. Having no value when standing alone the cipher increases or diminishes the *relative value* of other symbols according to its position. Thus each 0 placed after a whole number increases its value 10 times, or placed before the numbers in a decimal fraction decreases its value to one-tenth of the original value.

Circular number.—A number which occurs as the last figure in all powers of the number itself. The numbers 1, 5, 6, and numbers ending with these numerals are *circular* numbers.

Example: $6^2 = 36$, $6^3 = 216$, $6^4 = 1,296$, $6^5 = 7,776$, $6^6 = 46,656$, and so on.

Coefficient.—(1) In algebra a number or other symbol representing a fixed quantity placed before and multiplying any quantity expressed by a letter or letters.

Examples: $2a$, $3(b + c)$, $4xy$.

(2) In physics, a numerical quantity constant for a given substance, and employed to measure any one of its properties.

Example: E = the coefficient of elasticity. (See definition, p. 40 *ante*.)

Complementary number, or *Complement.*—The difference between any number and 10 or the next higher power of 10 above the number.

Examples: 2 is the complement of 8; 23 of 77; 450 of 550, and so on.

Composite number.—Any number that can

be exactly measured by a number exceeding unity.

Example: 12 is measured by 2, 3, 4, or 6.

Concrete number.—A number applied or used with reference to some concrete quality or thing. Same as an *applicate* and a *numerate* number (*q.v.*). The converse of an *abstract* or a *numerant* number.

Notes.—(1) It is important to remember that concrete numbers cannot be multiplied into each other. That is to say, six shillings cannot be multiplied by six shillings. This statement may appear to be contradicted by the fact that dimensions are multiplied one by another. Thus inches × inches = square inches, and square inches × inches = cubic inches. In reality, however, these processes do not constitute exceptions to the rule as the appellations are purely conventional and simply intended to express in a convenient way the product of two or three dimensions.

(2) A *concrete* number, however, can be divided by another *concrete* number, but the result is an *abstract* number.

Example: 120 lb. divided by 6 lb. = 20, not 20 lb., meaning that 6 lb. is contained twenty times in 120 lb.

(3.) When a *concrete* number is divided by an *abstract* number the result is a *concrete* number.

Example: 72 ft. divided by 6 = 12 ft., meaning that 72 ft. has been divided into 6 parts, each consisting of 12 ft.

(4) A *concrete* number cannot be used as the divisor of an *abstract* number.

Congruent number.—A number is described as congruent to another number relatively to a third number called the *modulus*, when the first two numbers give the same remainder on division by the modulus.

Constant.—(1) A quantity known or assumed to be invariable; (2) a fixed numerical quantity denoting some physical property of any substance.

Decimal.—An expression used to denote a decimal fraction, or a part of unity whose denominator is a power of 10 however it may be written. Thus $\frac{1}{10}$ and 0·1 are decimals or decimal fractions.

Deficient number.—A number, the sum of whose aliquot parts is less than the number itself.

Example: 15 is a *deficient* number as the sum of its aliquot parts (1 + 3 + 5) = 9. (See also *abundant* number and *perfect* number.)

Denominator.—A number constituting the lower term of a vulgar fraction, and indicating the value of the fractional part of unity to be taken.

Diametral number.—(1) A number equal to $\frac{1}{2}(1+\sqrt{2})^n + \frac{1}{2}(1-\sqrt{2})^n$, where n is any integer or whole number.

Such numbers are 1, 3, 7, 17, 41.

(2) A number that can be resolved into two factors, the sum of whose squares is a square.

Example: 120 is such a number, of which 15 and 8 are factors, and $(15^2 + 8^2) = 17^2$.

Digit.—Any one of the nine numerals 1, 2, 3, 4, 5, 6, 7, 8, 9. Some writers include 0 among the digits, but this is wrong because the term — derived from the Latin word *digitus* (a finger)—means one of the single numbers which were formerly indicated by the fingers.

Dividend.—A number that is to be divided into parts.

Divisor.—A number by which another number is divided.

Euler's numbers.—The numbers E_2, E_4, and upwards, only used in abstract mathematics and occurring in the development of sec. x by Maclaurin's theorem.

Factor.—One of the numbers, in a mathematical expression, which when multiplied together make a given product, also an expression or quantity by which another expression or quantity may be divided without a remainder.

Examples: In the expression (9 × 5) = 45, 9 and 5 are factors giving the product 45. In the expression 45 ÷ 9 = 5, 9 is a factor by which 45 can be divided without a remainder.

Factorial 9, or $\underline{|9}$.—The number which is the product of all the natural numbers up to 9 inclusive.

Example: $\underline{|9} = (1 \times 2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8 \times 9) = 362,880$.

Feminine number.—An even number, as 2, 4, 6, 8, in contradistinction to a *masculine*, or an *odd* number.

Figure.—In arithmetic any one of the characters or symbols used to express numbers (see *cipher*, *digit*).

Figurate numbers.—A whole number belonging to a series having unity for its first term, and for its first difference another series of figurate numbers or a constant number.

The nature of figurate numbers is explained by the following table:—

Natural.—		1,	2,	3,	4,	5,	6,	7, etc.
Figurate.—	*a.*	1,	3,	6,	10,	15,	21,	28, etc.
	b.	1,	4,	10,	20,	35,	56,	84, etc.
	c.	1,	5,	15,	35,	70,	126,	210, etc.

Here the natural numbers in the top line are taken as the basis of each of the three series of figurate numbers, which are formed by successive additions, in series (*a*), of the natural numbers, and, in series (*b*) and (*c*), of the figurate numbers in the lines immediately above the series to be formed. Instead of using a series of natural numbers whose difference is 1, we may take any other series whose differences are 2, 3, 4, 5, and upwards, and from any such series we can form a series of figurate numbers. Figurate numbers of the first order are termed *polygonal* numbers, and the terms *triangular*, *square*, *pentagonal*, etc., are given according as the difference of the basis is 1, 2, 3, and upwards. Figurate numbers of the second order are termed *pyramidal* numbers, and are said to be *triagonally*, *quadragonally*, or *pentagonally pyramidal*, according to the difference of the basis.

Fractional number.—A part or a number of aliquot parts of unity, or of another quantity, as $\frac{1}{10}$ (of 1); $\frac{1}{10}$ (of 80).

Galilean number.—The quantity g or the acceleration of gravity. (For values of g see Art. II., p. 49.)

Gradual number.—The ordinal number of a term after the first term in a geometrical progression.

Hankel's numbers.—The same as *alternate* numbers (*q.v.*).

Hendecagonal number.—A number of the form $\frac{n}{2}(9n - 7)$, where n is any integer. Among such numbers are 1, 11, 30, 58, and upwards.

Example: Where $n = 1$, we have $\frac{1}{2}(9 \times 1 - 7) = 1$; and where $n = 2$, we have $1(9 \times 2 - 7) = 11$.

Heptagonal number.—A number of the form of $1 + \frac{7}{2}n + \frac{5}{2}n^2$ where n is any integer. Among such numbers are 1, 7, 18, 34, and upwards.

Example: When $n = 0$ we have $(1 + 0 + 0) = 1$; where $n = 1$, we have $(1 + 3\frac{1}{2} + 2\frac{1}{2} \times 1) = 7$; and where $n = 2$, we have $\{1 + 7 + (2\frac{1}{2} \times 4)\} = 18$.

Heterogeneal numbers.—Numbers having opposite signs.

Example: + 3, − 5, + 1, + 6, − 7.

Heterogeneous number.—A number consisting of a whole number and a fraction.

Examples: $6\frac{3}{4}$, $14\frac{1}{2}$, 7·5, 15·6.

Homogeneous number.—A number consisting of a single figure or unit.

Icosahedral number.—A number of the form of $\frac{1}{2}n(5n^2 - 5n + 2)$ where n is any integer. Among such numbers are 1, 12, 48, 142, and upwards.

Example: Where $n = 1$, we have $\frac{1}{2}(5 - 5 + 2) = 1$; and where $n = 2$, we have $1(20 - 10 + 2) = 12$.

Imperfect number.—A number, the sum of whose aliquot parts is a number either greater or less than the number itself. In one case it is termed an *abundant* number (*q.v.*), and in the other case a *defective* number (*q.v.*).

Incomposite number.—Another term for a *prime* number (*q.v.*).

Integer.—A whole number in contradistinction to a fraction or part of a number.

Integral part.—The integer or whole number in a mixed number.

Example: In the mixed numbers 69·8 and $5\frac{3}{4}$, 69 and 5 are integral parts or integers, and ·8 and $\frac{3}{4}$ are fractions, respectively.

Irrational number.—(1) A number whose root cannot be expressed in *rational* numbers or by an ordinary fraction and can only be denoted approximately by the aid of a continued fraction or an indeterminate decimal fraction.

Example: $\sqrt{2} = 1{\cdot}41421 +$.

(2) A quantity that cannot be expressed in rational numbers.

Examples: π = the ratio of the circumference to the diameter of a circle = 3·14159 +; ρ or ϱ = ratio of the circumference to the radius of a circle = 6·2832 +.

Linear number.—A number relating to length, as, for example, a number representing one side of a plane figure. If the plane figure be a square the linear side is termed a *root*. (See definition, p. 24 *ante*.)

Logarithm.—An artificial number representing the power to which a number (constant for each system of logarithms and called the *base* of the system) must be raised in order to produce the natural number, or *antilogarithm*.

Ludolphian number.—Another name for π, or the ratio of the circumference to the diameter of a circle; an irrational quantity, so called because its value was determined to 36 places of decimals by Ludolf van Ceulen. (For value of π see definition, p. 49 *ante*.)

Masculine number.—An *odd* number in contradistinction to a *feminine* or *even* number (*q.v.*).

Measure of a number.—A number which is exactly contained in another number two or more times.

Minuend.—The number from which another number is to be taken away in the process of subtraction.

Mixed number.—A number consisting of an integer or whole number and a fraction. The same as *heterogeneous* number (*q.v.*).

Modulus.—A positive number serving as a measure of a function or effect. In one sense the term is synonymous with *coefficient* (*q.v.*)

Multiple.—A number produced by the multiplication of another number by a whole number, as 40 is a multiple of 4, the latter being a *sub-multiple* or aliquot part of 40.

Multiplicand.—A number which is to be multiplied by another number.

Multiplier.—A number by which another number is to be multiplied, also termed *multiplicator*.

Natural number.—One of the series of ordinary numbers commencing with 1, in contradistinction to *artificial* numbers (*q.v.*).

Number.—An arithmetical figure, character, or series of such figures denoting a quantity, magnitude, or measure.

Numeral.—One of the series of arithmetical figures used to express a number.

Numerant number.—The same as *abstract* number (*q.v.*).

Numerate number.—The same as *concrete* number (*q.v.*).

Numerator.—The number in a vulgar fraction indicating how many parts of unity or of another quantity are to be taken.

Examples: In the fraction $\frac{5}{8}$, the figure 5 is the *numerator*, showing that five one-eighth parts of 1 are to be taken; in the expression $\frac{5}{8}$ of 16, the numerator shows that five one-eighth parts of 16 are to be taken.

Ordinal number.—Any one of the series 1st, 2nd, 3rd, and upwards, in contradistinction to 1, 2, 3 and upwards, the latter being *cardinal* numbers (*q.v.*).

Perfect number.—A number that is equal to the sum of all its aliquot parts. For example, 28 is a perfect number as the sum of its aliquot parts (1 + 2 + 4 + 7 + 14) = 28.

Prime number.—A number which can only be divided without remainder by itself and by unity.

When two or more numbers have no common measure greater than unity they are said to be prime to each other, although not prime numbers themselves. Thus the numbers 4, 49, 81 are prime to each other.

Product.—The number obtained by multiplying one quantity into another.

Proportional part.—Numbers representing parts of magnitudes such that the corresponding parts taken in their order are also proportional.

Quotient.—The number obtained as the result of division, or the number of times one number is contained in another.

Rational number.—A number whose root can be expressed as an ordinary fraction. The term *rational* is applied to expressions in which no extraction of a root is left, or none indicated that cannot be actually performed by known processes.

Reciprocal.—A number which is the quotient obtained by the division of unity by any number of which the quotient is said to be the *reciprocal*.

Example: The reciprocal of 5 is $\frac{1}{5}$, and, conversely, the reciprocal of $\frac{1}{5}$ is 5.

Remainder.—(1) That part of a number which remains after the subtraction of another number.

(2) That part of a number which remains over after the division of one number by another.

Subtrahend.—The number to be taken from another number in the process of subtraction.

Square numbers.—Numbers which represent the squares of the natural numbers consecutively. These numbers are 1, 4, 9, 16, 25, and so on.

Surd.—The same as *irrational* number (*q.v.*).

Significant figures.—The succession of figures in the notation of a number. In a decimal fraction the ciphers coming after the decimal point are not considered, and the first digit is the first significant figure.

Example: In the number 123, the digit 1 is the first significant figure, and in the decimal fraction 0·000123, the digit 1 is the first significant figure.

Triangular numbers.—Numbers that begin with unity and increase by additions of the natural numbers respectively, as 1, 3, 6, 10, 15, 21.

Unit.—(1) A single thing; the lowest whole number.

(2) A single group of things or numbers in a plurality of similar groups.

OBITUARY.

MR. WENTWORTH-SHIELDS.—Mr. Francis Webb Wentworth-Shields, M.Inst.C.E., died at his residence at Sholing, near Southampton, on January 18, aged 85 years. He was born in Kilbeg, Co. Meath, and, after having served his articles to Charles Vignoles, went to Sydney and constructed the first railway in New South Wales, where he was appointed Inspecting-Engineer to the Colony. On returning to England, he was appointed resident engineer for the building of the Crystal Palace at Sydenham, and in 1860 he began to practise in Westminster as a consulting engineer. In the following year the Thames Embankment Commissioners gave their preference to a scheme propounded by Mr. Wentworth-Shields for a solid embankment from Westminster to Blackfriars with a sewer beneath the roadway. The main features of his project were ultimately adopted. In our issue of August 3, 1861, we published the text of the report with illustrations of his two alternative sections, and on January 6 last, p. 19 *ante*, we briefly described his share in the preliminary measures for that undertaking. Mr. Wentworth-Shields was associated with Sir G. G. Scott in laying the foundations of the Albert Memorial, Kensington Gardens, and in other works; he drew up a report upon means of transit across the Straits of Dover, and prepared designs for a Channel bridge. He was employed upon several important sewerage schemes, including those at Itchen, and elsewhere in the vicinity of Southampton. He was the author of some professional books, one of them being a treatise upon "Strains in Ironwork."

MR. W. REID.—Mr. William Reid, architect and surveyor, Fraserburgh, has just died there from peritonitis. He was born forty-one years ago at Alloa, and his last public work at Fraserburgh, where he commenced business some seven years ago, was the Infectious Diseases Hospital for the burgh. Prior to setting up in Fraserburgh, Mr. Reid had been estate architect on Wharncliffe, Forfarshire, and on Haddo, Aberdeenshire, and factor on Dunsinnane, Perthshire.

GENERAL BUILDING NEWS.

ROMAN CATHOLIC CHURCH, EDINBURGH.—Plans were passed in the Edinburgh Dean of Guild Court on the 11th ult., on the application on behalf of Archbishop Smith, for a church and presbytery at Falcon-avenue, Morningside. The church will be known as St. Peter's, Edinburgh, and will occupy a site of 140 ft. at the north-east corner of Falcon-avenue. Only part of the building is to be proceeded with at once, and it will accommodate a congregation of 300, but the completed building will seat about 700. The church, which is designed to lie east and west, will be in the shape of a Latin cross, with shallow sanctuary and transept. The nave, measuring from the floor to its highest part 48 ft. and 32 ft. in breadth, will be flanked by narrow aisles which, with the narthex or vestibule, allow a freeway for processions round the church. The whole interior will be whitewashed. The outside will have a small belfry on its south side, and at the north-east a turret containing a stairway to the organ gallery in the north transept. The church will be entered from a courtyard on the south, from which a covered cloister will lead to the porch. There will be a second entrance at the north-east. The church was designed by Mr. R. S. Lorimer, A.R.S.A.

CHURCH, NORWICH.—The new Church of St. Barnabas, North Heigham, was consecrated recently by the Lord Bishop of Norwich. The new church, which is designed to serve the eastern end of the thickly-populated parish of St. Bartholomew, stands in an angle between Russell-street and Derby-street, and may be approached from Dereham-road by either Mancroft-street or Old Palace-road and Devonshire-street. St. Barnabas church consists of nave, north and south aisles, and large chancel. A choir vestry and organ-chamber on the south side of the chancel will be added when funds permit. The architect is Mr. Arthur J. Lacey, Diocesan Surveyor. The general contractor is Mr. G. S. Tinkler, of Sandringham-road. The estimated cost of the building and its fittings is 5,536*l.*

CHURCH, SWANSEA.—The new Church of St. Michaels and All Angels, at Manselton, Swansea, was consecrated by the Bishop of St. David's on Wednesday, last week. The nave of the church is 72 ft. long by 25 ft. wide; north aisle and south aisle each 72 ft. long by 20 ft. 6 in. wide; and chancel 36 ft. by 25 ft. The accommodation is for 700 people. There are also an organ chamber, clergy and choir vestries, and a room for parish meetings under the chancel, approached by a stone staircase in a small turret. The nave and chancel roofs are barrel shaped. They are divided by moulded ribs carried on carved and decorated angels from the studio of Mr. William Clarke, of Llandaff. These angels are carved in teak wood taken from the old battleship *Exmouth*, the ship that Admiral Togo was trained in. The aisle roofs are also barrel shaped, and all the timbers are left clean from the plane. The east window of the chancel is a five-light, richly-traceried window, and so is that at the west end, and the gables of the aisles and the sides of the windows are four-light, traceried windows, all of a late character. The floors are laid with wood blocks, and the chancel has a tile pavement, with seven steps leading to the altar. The material used in the building is local stone, with St. Aldhelm stone dressings to the doors and windows, and the wall facing is rubble work. The dossel and side hangings were designed by the architect (Mr. Bruce Vaughan). The portion of the church already completed has cost 5,000*l.*, and the contractors were Messrs. Lloyd Bros., of Swansea.

NEW CHURCH, HARROGATE.—Plans have been prepared by Mr. Temple Moore, architect, of Westminster, for the erection of the Church of St. Wilfrid in Duchy-road. The building will be in the Early English style, providing accommodation for 900 persons. It is to consist of nave and two aisles, with north and south transepts and choir. The entire length will be 187 ft.; nave, 104 ft.; width of nave and aisles, 54 ft.; length of transepts, 112 ft.; length of choir, 80 ft., and width, 56 ft. The approximate cost, exclusive of tower and spire which will be erected later, is 24,000*l.*

GREAT GEORGE-STREET CONGREGATIONAL CHURCH, LIVERPOOL.—This church has been reseated throughout with American oak seats and relighted, reheated, and decorated throughout. The organ, a large and fine instrument, has also been renovated and decorated. The work has been carried out by Messrs. S. R. Henshaw & Son, under the superintendence of the architect, Mr. J. Francis Doyle.

WELSH CHAPEL, BARRY DOCK.—The opening of Carmel New Welsh Wesleyan Chapel, Pyke-street, Barry Dock, took place recently. The new chapel is 55 ft. long by 29 ft. 6 in. wide, and contains seating accommodation for 270 worshippers. The main entrance is from Pyke-street. The building is of Newbridge stone, with Bath stone dressings, in the Gothic style, with open timber roof. The screens, with rostrum and seating, are in pitch-pine. The architect was Mr. George Thomas, of Cardiff and Barry; and the contractors Messrs. Lloyd & Tape, builders, Barry Dock. The new building cost about 1,000*l.*

SCHOOL, DUNDEE.—A new school is to be erected by Dundee School Board from plans prepared by Mr. J. H. Langlands, architect. The site, which was secured from the Parish Council, has a fall of 9 ft. towards the south, and this enables the architect to arrange for the workshops being located underneath the first teaching flat, with entrances and lighting from the south. Accommodation will be provided for 1,110 pupils, and there will be eight classrooms for 45 pupils each, and 15 for 50 pupils each. The rooms for teaching cookery, laundry, and housewifery will be on the upper flat, while there will be necessary accommodation for cloakrooms, lavatories, and teachers'-rooms on the respective floors and landings.

CATHOLIC SCHOOLS, SUNDERLAND.—On the 22nd ult. the pupil teachers' centre and secondary schools, erected upon the site of the convent schools in Green-street, Sunderland, were opened. The building has been erected from the plans of Messrs. W. & T. R. Milburn, architects, Sunderland, the contractor being Mr. W. B. Cooper, of Sunderland.

ST. HELEN'S SCHOOL, ABINGDON.—A year or two have passed since Princess Christian laid at Abingdon the foundation-stone of a new school, dedicated to St. Helen. In the interval the work of education has been carried on in a temporary home, while a school building has been raised, about a mile north of the central point of Abingdon, on the Shippon-road. The expense has been some 30,000*l.*, and Mr. F. L. Pearson was the architect.

NEW SCHOOLS, DAWPOOL, CHESHIRE.—These schools, which were opened on the 27th ult., are built to accommodate 104 children, with a master's residence attached. There is a spacious entrance with hat and cloak room for boys and also girls and infants. The main schoolroom is 50 ft. by 22 ft. and 20 ft. high, classroom 20 ft. by 19 ft. and 16 ft. high. The building is faced with red brick and terra-cotta facings and red tiled roofs, made by Edwards, Ruabon. Messrs. John Thomas & Sons, of Oxton, were the builders, and Mr. J. Francis Doyle, of Liverpool, the architect.

SCHOOL, SOUTH SHIELDS.—A new infants' school has been erected in Gilbert-street, South Shields. The premises provide accommodation for 450 or thereabouts. The school is designed in accordance with the building regulations for planning new public elementary schools as issued by the Board of Education. It consists of a central hall with seven classrooms, arranged round three sides of the hall, and separated therefrom by glazed partitions. The central hall is 71 ft. long, 26 ft. wide, and 19 ft. high. It is lighted by mullion windows along one side. There are four classrooms, each 23 ft. 6 in. square, and each allowing for sixty scholars and a superficial floor area of 9 ft. per child. There are two other classrooms each 27 ft. 10 in. by 19 ft. 6 in.; and another 21 ft. by 23 ft. Cloak rooms are provided in close proximity to the entrances, and included also is a teachers'-room, 15 ft. by 11 ft. 6 in. The floors of the central hall and classrooms have been laid with pitch-pine wood blocks. Internally, the walls have a cream-coloured glazed tile dado. The walls above the dado are distempered. The playground is finished with tar paving; and there is a covered play-shed with seats and drinking fountain. The sanitary fittings were supplied by Messrs. Adamsez, Ltd. The buildings are heated and ventilated on the Plenum system, and are of brick with red brick facings and stone dressings. The contract price of the building is 5,516*l.* 4s. 6d., and the heating and ventilating, carried out by Mr. Wm. Key, of Glasgow and London, has cost 581*l.* The school has been erected from the designs, and under the superintendence of Mr. J. Walter Hanson, architect, South Shields, by the contractors, Messrs. Glen & Moffett, of Jarrow. The sub-contractors were:—Plumbing, Messrs. J. Dagleas & Sons; slating, Mr. Digby Nelson; plastering, Mr. T. Anderson; painting and glazing, Mr. Dixon; tiling, Messrs. Emley & Sons, Newcastle; block flooring, Messrs. Nichols & Co., London; furniture, Mr. J. D. Bennett, Glasgow. The electric lighting and the arrangements for the electrically-driven ventilating fan, have been carried out under the supervision of the Borough Electrical Engineer (Mr. Cawthra), by Mr. J. T. Dagleas.

CHURCH SCHOOL, HUDDERSFIELD.—The corner-stone of new day and Sunday schools for the parish of St. Paul's, Huddersfield, was laid on the 27th ult. by Lady G. Ramsden. The building will provide accommodation for 300 scholars in the mixed department and 150 in that of the infants. Mr. W. Cooper is the architect of the work, the cost of which will be about 5,600*l.*

GRAMMAR SCHOOL, BRIDLINGTON.—The Bridlington Girls' High School was formally opened on the 29th ult. by Lord Wenlock, Chairman of the East Riding County Council. The building was formerly known as The Elms, and was owned by the Bridlington Corporation, but it has recently been acquired by governors, and remodelled and enlarged to suit the purposes of a school by Mr. J. Bilson, architect, of Hull. A wing has been added, consisting of an assembly hall on the ground floor, while overhead there is a science lecture-room, store-room, and science laboratory. Attached to the school are grounds and gardens.

SCHOOL, BARGOED.—Glamorgan County Council have erected a new boys' school at Bargoed. Built of Pennant stone, with Forest of Dean and brick dressings, the school has accommodation for 350 children, and in addition to a large marching hall, there are six classrooms, cloakrooms, and two teachers' rooms. The area of the site is about three-quarters of an acre, and the cost of the work was 6,200*l.* Mr. John Lewis, Caerphilly, was the builder, and the architects were Messrs. Morgan & James, of Cardiff.

SCHOOLS, OAKLANDS-ROAD, HANWELL.—The Oaklands-road Council Schools, Hanwell, was opened on the 27th ult. The buildings have been erected on a site purchased by the late School Board, the department being arranged as follows: A two-story building for mixed classes and a separate building for infants, each department having a central hall and classrooms. The lavatories, teachers' rooms, storerooms, etc., being arranged on mezzanine floors. The schools afford accommodation for 1,143 scholars, viz.:—Senior mixed, 388; junior mixed, 388; and infants 367. Each department has duplicated entrances, cloakrooms, and lavatories, and the senior mixed has two staircases. The buildings are heated by hot-water radiators and open ventilating fireplaces. The ventilation is that known as the "Natural" system, having fresh warm and cold air inlets, and the extraction of vitiated air is effected by ceiling ventilators and extract flues. All classrooms in the mixed block have stepped galleries, and throughout the buildings the classrooms have left-hand lighting. The floors are fireproof, being constructed of steel girders and concrete, and are paved with wood blocks. Glazed brick dadoes are provided throughout, and all joinery and exposed timbers are stained and varnished. Covered playsheds are provided

in the playgrounds, as well as a house for the caretaker. Externally the walls are built with stock bricks from the Cowley district, and the roofs are covered with Welsh blue slates. The roof of the caretaker's cottage is covered with Broseley tiles. The gable copings, cills, strings, cornices, etc., are executed in Stamford stone. The amount of the contract was 18,250*l*. The general contractor was Mr. F. G. Minter, of Putney, whose foreman was Mr. C. S. Abbey. The whole of the works have been carried out under the superintendence of Mr. William Pywell, the architect, whose son, Mr. W. J. Pywell, acted as clerk of works.

HOTEL, SHEFFIELD.—Work has just been commenced on a new hotel in Leopold-street, Sheffield. The building will have sleeping accommodation for more than 200 guests. Messrs. Connon & Chorley, of Leeds, are the architects for the work, the contractors being Messrs. Fidler, of Sheffield.

NEW BATHS, MANCHESTER.—Mr. H. P. Boulnois recently held an inquiry on behalf of the Local Government Board at the Town Hall, Manchester, into the application of the City Council for permission to borrow 39,715*l*. for the erection of public baths at Bradford and 19,144*l*. for the completion and equipment of the Victoria Baths in High-street. Mr. Hudson, the Deputy Town Clerk, said it was proposed to erect three swimming baths, 28 wash baths, and 40 washing stalls. The building would be erected with best substantial ordinary materials, with plain brick elevation and terra-cotta facings. Mr. H. Price, the City Architect, described the plans and stated that, as far as it was possible to ascertain, the estimate of 39,715*l*. would cover the whole of the expenditure and contingencies. The Commissioner next received evidence respecting the Victoria Baths. Mr. Price said there had been no alteration of importance in the plans of the buildings, but certain changes had been made in the materials used. It was proposed to build a laundry in connexion with baths, and his estimate of the cost was 2,100*l*. The City Surveyor, Mr. T. de Courcy Meade, also gave evidence.

FREE LIBRARY, LURGAN.—The free library which has been erected in Carnegie-street, Lurgan, was opened on the 8th ult. The structure has been erected by Mr. Wm. Callaghan, Maralin, from plans prepared by Mr. Henry Hobart, C.E., Dromore. It is built with brick, and faced with perforated red brick, and Aspatria red sandstone dressings, the latter supplied by Mr. M'Cormick, Belfast. The building occupies 100 ft. frontage. On the first floor is a vestibule entrance leading to a hall, which communicates through swinging doors with a recreation-room, 25 ft. by 25 ft., and a reading-room, 25 ft. by 40 ft. Leading from the hall is a staircase in three flights, which is lighted with a cathedral glass window bearing the Lurgan town coat of arms. This window and the several stained-glass windows throughout were supplied by Messrs. Campbell Brothers, Belfast. On the top floor is the lending library, 25 ft. by 40 ft. A men's lavatory has been provided on the ground floor, and convenient to the lending library is a cloak-room and lavatory for ladies. The building is heated by a low-pressure hot water system, supplied by Messrs. John Long & Sons, Lurgan.

FREE LIBRARY, STAMFORD.—A new free library has been erected at Stamford, from designs prepared by Messrs. Hall & Phillips, London (whose plans were selected in an open competition), by Messrs. Hinson Bros., builders, Stamford. The site was provided by the Corporation, and occupies a central position in the town, having a frontage on the main street.

FREE LIBRARY, BERMONDSEY.—St. Olave's Library, Bermondsey, has just been opened for the Borough Council. The library was originally St. John's Girls' School, Tooley-street, but the building has been adapted to the purposes of a library. To effect the alterations necessary to adapt the school to the purposes of a library the whole of the walls and partitions which formed the classrooms were swept away, and about 15 tons of steel girders were used in forming the various floors, etc. The accommodation in the building as altered consists of a large dry book store and heating chamber in the basement. On the ground floor there is a magazine and news room, 34 ft. long by 24 ft. wide, in which 50 or 60 readers can be accommodated at the newspaper desks and magazine tables. The room is entered directly from the street. There is also a reading room for ladies and a separate one for boys. The first floor is utilised as a lending library and a reference reading room. Accommodation is provided for the present stock of 8,586 volumes, with expansion room for a total stock amounting to 12,000 volumes. A feature of the lending library arrangement is the long counter with polished mahogany top and an unusually large provision of drawers and cupboards. The reference reading room adjoins the library, and through the glazed dividing partition the reference library books may be inspected by the readers, at the same time securing easy and quick service. The counter already mentioned serves to carry the two indicator frames, containing numbers representing 10,000 volumes. Apartments have been provided on the upper floor for the use of the librarian in charge. For recreation of the librarian there has been arranged a large flat, which may be formed into a roof garden overlooking the Tooley-street recreation grounds. The whole of the various rooms forming the library have been divided with ornamental wood screens glazed with plate-glass, and the interior of the building has been decorated in Duresco colours. The building is warmed by hot-water pipes and lit by electric light. A feature has been made of the angle doorway, which forms the main entrance to the building, and which is constructed in stone, and has a carved representation of the borough coat-of-arms in the pediment. The alterations have been designed by the Borough Surveyor, Mr. R. J. Angel, M.Inst.C.E., in conjunction with Mr. John Frowde, the chief librarian, and carried out by Mr. B. E. Nightingale, Albert Embankment.

FREE LIBRARY, HARROGATE.—A new free library has been erected at Harrogate facing Victoria-avenue and Raglan-street. It is the first portion of the proposed Municipal Buildings, and is so constructed that it will readily join up with them when the extension works begin. The entrance is from Victoria-avenue into an entrance hall, which also forms the space for borrowers from the lending library. Leading direct from this entrance hall is the news room, 50 ft. square and lighted both by windows and from the roof. This room will afford accommodation for about 200 readers. The lending library will provide shelving for about 40,000 volumes. In the half basement are a large boys' reading room, 30 ft. by 22 ft., book stores, heating chamber, etc. On the first floor there are a reference library and magazine room, 44 ft. by 22 ft., book stores, and librarian's room. The floors and staircases throughout are of fireproof construction. The heating is by low-pressure hot water. The lighting throughout is by electricity, which will also be used for working a fan for ventilation purposes. The architect is Mr. H. T. Hare, of London. The total cost of the building and furnishing has been a little over 8,000*l*.

THE HOLBORN EMPIRE.—The new theatre of varieties in Holborn is to be known as the Holborn Empire. The new building, which stands on the site of the old "Royal," has been constructed from the plans of Messrs. Frank Matcham & Co. at a cost of 30,000*l*. The old building was a one-tier house, but by taking in the basement and utilising the space hitherto occupied by cellars room has been provided for a circle with a balcony over. The stage, which was originally on the left of the main entrance, now faces it. The gain in space has provided a stage large enough to accommodate any music-hall production. The theatre has total seating accommodation for 2,000 persons. There is a foyer 40 ft. in length. The decorations of the auditorium are designed in a free treatment of French Renaissance, the colour scheme being white, cream, and gold. The ground floor is divided into fauteuils, stalls, and pit stalls. There are foyers, lounges, and retiring rooms in all parts of the house.

NEW NORTH RIDING COUNCIL BUILDINGS, NORTHALLERTON.—New buildings for the North Riding County Council have been erected at Northallerton close to the railway station. The entrance gates, about a hundred yards from the railway station, open upon an extensive piece of ground lying between the front of the building and the road. The front elevation is Renaissance in style, the red brick facing being relieved by white stone dressings. The iron screen gates bear the County arms in the form of shields, beyond which the swing doors lead from the outer vestibule to the arched entrance hall, which is divided into bays by Hopton Wood stone columns. The pillars have black marble caps and bases, and the same materials are used in the grand staircase which faces the main entrance, and the balustrade is of fossil Frosterley. Across the top of the main staircase extends an ante-room or corridor, which, like the rest of the corridors, has a floor of black and white marble, the former Belgian and the latter Sicilian. The Council Chamber is 45 ft. square, and lies at the rear of the building, the ante-room forming the connecting link between the two. To a height of 25 ft. from the floor, which is laid with wooden blocks, rises the domed ceiling of fibrous plaster, light being obtained through four lunettes. On each side is a semi-circular window at a considerable height from the floor. The interior has pilasters and columns of the Corinthian order, and the wall space between them is treated with raised panels of fibrous plaster. A Cuban mahogany panelled dado runs round three sides, and, behind the dais, the panelling is carried to a height of 8 ft. and enriched with carving. The heating and ventilation are on the Plenum system. The Grand Committee-room is approached from the ante-room by way of the second flight of the chief staircase. It is 46 ft. by 28 ft. and has fluted Corinthian columns carrying the cornice. Three other committee-rooms *en suite*, the chairman's room, and members' smoking-rooms complete the accommodation on the south half of the first floor, the other part being reserved for the county surveyor and clerk of accounts. Coming back to the entrance hall, corridors to right and left gives access to suites of offices occupied by the clerk to the Council, the Education Department, the architect, and building inspector, whilst provision is also made for storage, muniment, and search rooms. Electric light from the local mains is provided in all parts of the new hall. The estimated cost of the building, including the caretaker's cottage, boundary walls, entrance gate, and railing, laying out of grounds and forecourts, etc., formation of roads, and the furnishing of the entire building was 33,000*l*., and it has been carried out within that amount. The building contractors were Messrs. J. Howe & Co., of West Hartlepool. The furnishings were carried out by Messrs. Goodall, Lamb, & Heighway, of Manchester; and the electric light fittings, designed by the architect, were manufactured by Messrs. Singer, of Frome. The architect is Mr. Walter H. Brierley, F.S.A., of York.

APPOINTMENTS.

BRITISH MUSEUM.—The King has nominated Lord Esher as Royal Trustee of the British Museum *vice* the late Sir Mountstuart E. Grant-Duff.

CORPORATION OF THE CITY.—Mr. Alexander Ritchie, Common Councillor and J.P., has been elected Chairman of the City Lands Committee of the Corporation of London.

LONGRIDGE URBAN DISTRICT COUNCIL.—The appointment as Engineer and Surveyor to Longridge Urban District Council is announced of Mr. James Marshall, Chief Assistant-Engineer to Preston Corporation.

METROPOLITAN MUSEUM, NEW YORK.—Mr. Roger E. Fry has been appointed Curator of the collection of pictures. Mr. Fry is a member of the New English Art Club and a contributor to the *Burlington Magazine*; some years ago he succeeded Mr. F. G. Stephens as art critic to the *Athenæum*.

FOREIGN.

CAPE TOWN.—The result of the competition for the new Law Courts is as follows:—The first premiated design is that by Messrs. Hawke & McKinlay, the design placed second is that by Messrs. Milne & Sladdin, the third being by Messrs. Baker & Masey, all firms practising in Cape Town. The adjudication of the designs was entrusted to a special committee, appointed by the Government, consisting of Sir Henry de Villiers (Chief Justice), Sir John Graham (Secretary to the Law Department), Mr. Advocate Searle, K.C., and Mr. C. H. van Zyl, with Mr. Mervyn Macartney as assessor. The premiums given were 500*l*., 300*l*., and 200*l*. The estimated cost of the building, exclusive of fittings, is 175,000*l*.

SOUTH AFRICA.—The monthly statistical returns compiled by the Johannesburg municipality show that 127 buildings were approved by the Town Council during the month of November last within one mile of the Market-square, 177 from one to two miles, 191 from two to three miles, and 65 from three to six miles, while on the mines 35 were approved. The total estimated cost of the buildings was 320,102*l*.——Tenders are called for by the Lorenzo Marques Construction Department for the erection of sanitary buildings at the wharf. The estimate of the department is 1,350,000 reis.

TOWNS AND BUILDINGS IN EGYPT.—In the last-published report of the Egyptian Public Works Ministry, Mr. Arnold Perry gives a large amount of useful information relative to the work of the Towns and Buildings Department for 1904, although the interest of his account is considerably diminished by the fact that it consists chiefly of statistics. Mr. Perry's duties as Director-General of this branch of the Public Works Ministry are so important and so varied, and the difficulties with which he has to contend are so great, that the annual record of his experience would certainly be more interesting if accompanied by a larger proportion of descriptive matter and comment. Two particularly interesting notes, however, will be found in his last report, one relating to the removal of a large mass of rock which threatened the safety of the Mosque of El-Magnari at Cairo, and the other describing the failure of the reinforced concrete roofs of the quarantine cattle-sheds at Mex. The failure of these roofs is shown to have been entirely due to the inferior quality of the concrete, which was neither airtight nor watertight. After the collapse had been investigated by a Commission appointed for the purpose, it was conclusively established that the chief cause of the observed deterioration, in the concrete and iron alike, was the adulteration and partial replacement by local limestone of the cement, which is the only constituent of concrete that affords any guarantee of impermeability, and, we may add, of durability and strength.

BAVARIAN GLASS INDUSTRY.—Reporting on

this subject, Mr. Buchmann, H.M. Consul at Munich, observes that the manufacture of glass was impeded in 1904 by dry weather and lack of water-power, especially in the Fürth district, the centre of the industry. The United States market, once all-important, is being spoilt by inland competition and high duties, whilst the Canadian market has been lost entirely by the tariff war; the duty on Bavarian blown glass was formerly 20 per cent. *ad valorem*, Belgian crystal glass paying 25 per cent., but now the duty on German glass has been raised to 26¾ per cent., whilst the duty on Belgian glass has been reduced to 10 per cent. If this state of affairs continues, the Bavarian glass industry will soon be a thing of the past, having besides to fight against the keen competition of the Rhine provinces, Silesia, Saxony, Belgium, and Bohemia. Fürth (Nuremberg) exported in 1890 to the United States glass to the value of 470,000*l.*, which sum fell to 118,533*l.* in 1903, and to 62,834*l.* in 1904. The same place exported up to 1904 mirrors to the value of about 12,500*l.* per annum to Canada, but since the new tariff and surtax amount to 26¾ per cent. of the total value the export trade to Canada is almost killed. Some works have ceased to manufacture mirrors, having turned to plate-glass instead, whilst other works have stopped manufacturing entirely. The raw materials necessary to the glass industry have also considerably increased in price—acids, arsenic from 15 to 20 per cent., shellac even 300 per cent., etc., whilst the increase of the sale price was only from 5 to 12 per cent. This increase was partially rendered possible by the strike in Belgium, by which the Bavarian glass industry profited temporarily. The competition, however, of the United Kingdom and Belgium made itself felt later on, these countries having lost their market in the East through the war in Asia and seeking new outlets. Stained glass, one of the chief art productions for which Munich is famous, suffered in 1904 on account of a decrease in orders. The chief cause of this depression is said to be an Order of the Ministry of Education and Worship (Kultusministerium), by which stained glass of more modern styles is no longer to be admitted in Bavarian churches. New markets have, therefore, to be sought in North Germany, prices having decreased in consequence. The new Order creates a great deal of dissatisfaction, and it is anticipated that the staffs of numerous Bavarian glass painting establishments (there are thirty-four in Munich alone, employing some English artists) will have to be reduced, or the establishments will have to be moved to foreign countries. Added to this, wages of artists have risen, and the export to Canada and the United States suffers from the surtax and the heavy duty of 45 per cent. of the value respectively.

MISCELLANEOUS.

PROFESSIONAL AND BUSINESS ANNOUNCEMENT.—Mr. Bernard Dicksee, the District Surveyor for Newington and part of St. George the Martyr, has removed his district offices to Nos. 14 and 16, New Kent-road, S.E. (over the London and Westminster Bank).

A LONG-LIVED STOVE.—The Carron Company send us an extract from a letter from one of their correspondents in Canada, the interest of which to them is obvious, but which we agree with them in thinking may be of interest to our readers also:—"I was on a business trip this fall in the north-east part of Saskatchewan, and saw a box stove of what I thought was a new design in box stoves. On inquiring where the man got it, he said it was his great-grandfather's, and that it was made by the Carron Company 150 years ago. I thought it most extraordinary for a stove to last that length of time. The stove belongs to the early settler's family that came out with Lord Selkirk."

ROYAL ACADEMY EXHIBITION.—The sending-in days for the next Royal Academy Exhibition are: For water-colours, miniatures, black and white drawings, engravings, etchings, architectural drawings, and all other works under glass—Friday, March 30: for oil-paintings—Saturday, March 31, and Monday, April 2: for sculpture—Tuesday, April 3. The hours for the reception of works are from 7 a.m. to 10 p.m.

NO. 11, DOWNING-STREET.—The new Ministry have departed from the time-honoured custom whereby this house has formed the official residence of the Chancellor of the Exchequer. Mr. Herbert Gladstone, the Home Secretary, has taken up his abode in the house, where some necessary repairs were recently made, and is thus installed in his birthplace, for he was born there during his father's tenure of office as Chancellor of the Exchequer.

DISTRICT SURVEYORS' FEES.—The Baths and Washhouses Committee of Wandsworth Borough Council, in a report circulated on Monday, stated that they had addressed a letter to the London County Council calling attention to the excessive fees for small additions to large buildings made by district surveyors. In relation thereto they had received a communication from Mr. L. R. Ford, District Surveyor, offering to reduce his fee in regard to the new pump-house recently erected at the baths from 18*l.* 2*s.* 6*d.* to 10*l.* 10*s.* The Committee had accepted this offer and had passed a resolution directing that a further letter be addressed to the London County Council and that Mr. Ford be also informed that the object of the Committee had been to call attention to the general question of the excessive fees charged in respect of small additions which, under the London Building Act, are calculated upon the area of the entire building. The Committee had recently decided to postpone carrying out certain work on account of the excessive fee which would be chargeable, amounting to nearly half the amount of the Surveyor's estimate of the cost of the work.

A QUESTION OF PAVING.—The Works and Highways Committee of Lewisham Borough Council reported on Monday having been in communication with the Building Acts Department of the London County Council with regard to the paving of strips of land given up as a condition to plans being passed for the erection of buildings. The Building Acts Committee expressed the opinion that in all cases where a condition is attached to a consent under the Building Acts requiring the surrender of land to the public way, the owners of such land should not be put to the expense of paving it. Under these circumstances the Borough Council Committee had directed their surveyor to carry out the necessary paving work with regard to the land given up.

THE OLD BRIG, AYR.—The Ayr Town Council, after being in communication with Mr. Oswald and a deputation representing persons interested in the preservation of the Auld Brig, and after considering the best methods of preserving the bridge without rebuilding it, as suggested by Mr. Hall Blyth, have unanimously agreed to the following resolutions:—"(1) Mr. Oswald is, as soon as possible after the General Election is over, to convene a public meeting in Ayr, when resolutions will be submitted and a committee appointed to take all steps considered expedient to obtain subscriptions for executing the works necessary for the preservation of the bridge; (2) should the committee, not later than August 1 next, succeed in raising the funds required for the work (which it is presently assumed may cost about 10,000*l.*) the Town Council will allow the committee to carry out the necessary preservative works on the bridge at the sight, and to the satisfaction of, an engineer of eminence, to be selected by the committee; (3) the work will be proceeded with without delay, so soon as the necessary funds are raised, and the whole work is to be finished not later than August 1, 1908, when, or at the completion of the work if of earlier date, the committee will cease to have any further connexion with the bridge, the Town Council thereafter resuming full control over it; (4) should the committee find it necessary to rebuild any portion of the bridge, they shall submit plans and specifications of same to the Town Council, along with the offers for the execution of the work, and if the Council approve of same they will bear the cost of such rebuilding out of the Templeton bequest fund. Should the Town Council consider it necessary that a temporary wooden bridge be erected while the structure is being repaired or rebuilt, they shall be at the expense of erecting and maintaining it," etc. Another important condition laid down was that "the plans and specifications of the whole works to be executed by the committee shall be submitted to the burgh surveyor, that he may assure the Town Council that the proposed works will make the bridge secure for public traffic for the future, and until this assurance is given the work shall not be proceeded with." It was stated that in the event of Mr. Oswald's committee being unable to fulfil their part of the arrangement the Council would take up the question of rebuilding the bridge where they had left off.

A NEW WINDOW SASH.—Messrs. Recorders, Ltd., have shown us a model of a new window sash entitled "The Magic Window Balance," which, in spite of a rather absurd name, has much to recommend it. It appears at first sight, when closed, like an ordinary sash window, but there are no hollow casings, lines, or pulleys. The sashes are balanced, and when the lower one is raised the upper is lowered correspondingly—so far it is not new; what is new is that the two sashes are connected by a hinged and pivoted arm, and after being opened perpendicularly for a short distance, the upper edge of the lower sash can be drawn inward, the upper sash following it in a parallel line, so that the two swing pointing obliquely toward the ceiling, giving the best form of air passage for an upcast current of air into the room. The whole construction is perfectly solid; there is nothing to get out of order; and the outside of both sashes can, by a simple arrangement, be cleaned from the inside. The only drawback, or which may be regarded as such by some people, is that the vertical rise of the lower sash, before it is canted, is limited; it cannot be raised high enough, for instance, to allow one to lean out of the window; but then it may be replied that leaning out of windows is a bad practice. At all events, that seems the only drawback to what is, on the whole, one of the best and most workmanlike special forms of window sash that we have seen.

BRADFORD MASTER BUILDERS' ASSOCIATION.—The annual dinner of the Bradford Master Builders' Association was held on the 26th ult. at the Royal Hotel, Darley-street. Mr. Angus Moulson presided. Mr. B. Hanson, in proposing the toast of "The National and Yorkshire Federations of Building Trade Employers," referred with gratification to the arrangement arrived at last year with the employees for the avoidance of strikes. Mr. Paul Rhodes (President of the Yorkshire Federation of Building Trade Employers), in responding to the toast, said that the employers' federations had not been formed with the object of reducing wages or of fighting the trades unions. On the contrary, the existence of such federations was the best guarantee of industrial peace. He hoped that something might be done by combination to put a stop to the senseless cutting of prices in contract work. Mr. John Dawson also responded to the toast. Mr. A. Gadie, replying to the toast of "The City and Trade of Bradford," which was proposed by Mr. Archibald Hope, said that for a long time trade in Bradford, as far as the builders were concerned, had been deplorable, and the reason was that the staple trade had not been prosperous. Builders were always the first to feel bad trade, and the last to benefit by a revival. Should the staple trade improve, building would begin again, and the unemployed difficulty would vanish very soon. Mr. W. Cryer gave the toast of "The Bradford Master Builders' Association," which was acknowledged by the President. Referring to the retirement of his predecessor in the office, Alderman Holdsworth, the President, said that no one in the country had done more to promote the welfare of the building trade, and it was a matter for great regret that he should be laid aside. Continuing, the President regretted that some of the leading builders in Bradford did not show sufficient interest in the Association. Combination amongst employers was more necessary now than ever it had been before. Labour members had been returned to Parliament in large numbers, and they would have much to say of rights and privileges that had hitherto been denied them. Nobody wished to assert that labour had not its rights, but the employer had his rights too, and it would be the duty of organisations such as the Bradford Master Builders' Association to see that they were not infringed. Mr. T. E. Taylor also responded to the toast. The toast of "Kindred Associations" was submitted by Mr. R. Raper, and responded to by Mr. T. Billington (President of the Bradford Master Plasterers' Association) and Mr. G. Spencer (President of the Master Painters' Association).

FALL OF COPING.—On the 29th ult., at the Brixton Coroner's Court, Mr. G. P. Wyatt held an inquest concerning the death of Arthur William Moscrop, aged eight years, whose parents reside in Akerman-road, Brixton. The child was fatally injured as a result of the coping of four houses—47, 49, 51, and 53, Akerman-road—falling upon him. Mr. Percy Hunter, District Surveyor to South Lambeth, stated that on visiting the four houses in question the day following the accident he found that the parapet of the front wall to the extent of 72 ft. by 2 ft. 10 in. to 3 ft. had fallen. The weight of the material that had fallen he calculated at about 10 tons. The cement covering of the parapet was cracked, the brickwork rotten through being sodden by water, and there was no proper bond for the party walls. The vibration caused by the traffic, the weather influences, and the defective mortar had each probably contributed to the accident. The frost on Tuesday night had undoubtedly also tended to disintegrate the mortar, and thus played its part in causing the structure to collapse. There was no outside indication that the brickwork was defective, and the actual cause of the accident was the weight of the cornice causing the brickwork to give way. He had served dangerous structure notices upon the owners of the premises, and also upon the owners of the adjoining property, and had also had the remaining portion of the copings removed. A verdict of "Accidental death" was returned.

APPOINTMENT OF SANITARY OFFICERS.—The Local Government Board has sanctioned the appointment of Dr. G. F. McCleary as Medical Officer of Health for the Metropolitan Borough of Hampstead. They have sanctioned the appointment of the undermentioned persons as Sanitary Inspectors in Metropolitan boroughs as follows: Islington—Mr. T. H. Hancock, as from January 15, 1906. Lambeth—Mr. J. S. Clements, as from January 1, 1906; Miss L. M. H. Pearson, as from January 1, 1906. St. Pancras—Miss B. Gardiner, as from November 23, 1905. Stoke Newington—Mr. T. Topping, in the place of Mr. G. F. Taverner.

BUILDING TRADES EXHIBITION, MANCHESTER.—A Building Trades Exhibition is announced to be held at St. James's Hall, Manchester, from April 25 to May 5. From the announcements that "no medals or diplomas will be given," and that "every likely buyer will receive invitation

with free ticket direct from the management," it would seem that it is rather in the nature of a sale than an exhibition in the more important sense of the word.

THE GROWTH OF COVENTRY.—The number of houses erected in Coventry during the past seven years has averaged nearly two per day. Since 1899 4,063 houses and other buildings have been erected. Seven years ago the record for the twelve months was 117 new buildings completed. In 1904 the figures had grown to 746, whilst last year 426 new buildings were put up. It is interesting to note that at the beginning of the XVIIIth century there were under 2,000 houses inhabited in the city, whereas now there are about 17,000 houses tenanted.

"A.A." OLD DAY STUDENTS' CLUB.—The fifth annual dinner of the Architectural Association Old Day Students' Club took place at the Florence Restaurant on January 26. The number of those present was thirty, including Mr. E. Guy Dawber who presided, and Mr. H. Tanner, jun., the Hon. Secretary of the Architectural Association who was present as a guest of the Club. After the usual loyal toasts had been proposed by the Chairman, Mr. H. Tanner briefly proposed the "Architectural Association and the Day School." Mr. Maule, in replying, remarked that he always thought that this annual gathering was an admirable opportunity for taking stock of the position of the School. He briefly ran over the history of the School from its inception in 1901, paying special attention to the numbers working there at different periods down to the present total of 37 in the first year and 18 in the second year. He drew attention to the fact that the scheme of work now followed was almost identical with that planned by Mr. A. T. Bolton at the beginning (Mr. Bolton's name being received with general applause). He applauded the feeling of *esprit de corps* present in the School and fostered by the Club, and remarked that every activity should be welcomed as long as it led up to the "larger policy" of the Architectural Association itself. But he would warn the Club against ever intruding intentionally or otherwise upon the work of the Architectural Association itself. All members of the Architectural Association should be proud of their membership of that Society, and he noted as an additional reason for such pride that in the Institute Studentships just awarded seven out of the eleven had been made to Architectural Association men. Mr. Dawber then proposed the toast of "The Club," wishing it every success on his own behalf and on that of the whole Architectural Association Council. In his opinion the Club was an excellent institution, as it helped to keep those fellow-students together in after life who had worked side by side in the School. He reminded those present that they could do much as a Club towards helping the spirit of good fellowship in the Association. Mr. Travers, the Hon. Secretary of the Club, in replying, noted the fact that, although the Club was, and had always been, an unofficial body composed of past students of the School, and not necessarily all members of the Association, yet it had, when opportunity offered, devoted its energies towards the furtherance of that "larger policy" to which Mr. Maule had referred.

THE T SQUARE CLUB.—The first meeting of this Club as newly constituted was held on Tuesday, the 23rd ult., in the International Hall, Monico Restaurant. The proceedings opened with an invitation supper followed by a concert. The chair was taken by Mr. E. G. Rivers, who, in proposing the toast of "the Club," asked for an announcement as to the exact position of the Club. The Secretary, in reply, stated that as now constituted it consisted entirely of members of recognised professions who were solely engaged in professional practice, and the object of the Club was to provide social evenings during the winter months. The entertainment which followed, carried out under the direction of Mr. J. Harry Pitt, was provided by Mr. Arthur Grover, Miss Marie Schulz, Lieut.-Col. W. H. Allen, Mr. Fred Curtis, Mr. Harry Vincent, Mr. J. Harry Pitt, Mr. Spurrell Groom, and Mr. Wingrove Ives. All information regarding the Club may be obtained from the Hon. Secretary, Mr. W. H. Webber, 7, Great James-street, Bedford-row, W.C.

GLASGOW ARCHITECTURAL CRAFTSMEN'S SOCIETY.—A meeting of the Architectural Craftsmen's Society was held on the 26th ult. in the Technical College, Glasgow. Mr. Colin Sinclair presided. Mr. J. Campbell Reid read a paper on "Architectural Censorship." Mr. Reid showed by numerous lantern views architectural mistakes, due to the want of proper supervision of architectural schemes, with reference to the relation of new buildings to their surroundings, which were often of real architectural or historical value, and were thrown out of scale by the new structures. The lecturer advocated the appointment of small committees for each district of large towns, who would form an Architectural Court, before whom all plans for proposed buildings would be submitted after having been sanctioned by the Dean of Guild Court. These committees would refer any schemes opposed to architectural principles to the censor, who would be an architect or artist of repute appointed by the Government, and whose decision would be final. Mr. Reid also advocated the laying out of new streets by architects, who would introduce more varied lines than those laid down by engineers, and thus relieve the monotony of many of our thoroughfares. A vote of thanks to the lecturer was proposed by Mr. C. Ernest Monro and carried.

CHURCH OF ST. JAMES, LOWER CLAPTON.—Sitting in the Consistory Court of London on January 22 Dr. Tristram, K.C., Chancellor of the Diocese, granted a faculty for authorising the vicar and churchwardens of St. James to carry out certain alterations and improvements of the church which was built in 1841 after designs, in the Gothic style, of A. W. Hakewill. The church contains about 800 sittings, whilst the population of the parish amounts to 10,000. The proposed works comprise the building of a chancel, clergy-vestry, and choir-vestry, with an organ chamber above, the re-arrangement of the seats in the nave and transepts, new seating throughout, and the re-lighting of the entire edifice. The alterations will increase the accommodation by about 60 sittings and the vestries will be erected upon part of the ground originally conveyed for the site of the church, no interments having been made therein. Towards the estimated cost (4,500*l.*) the Ecclesiastical Commissioners have contributed 1,000*l.*, and 2,260*l.* have already been subscribed.

DIRECTORY OF AMERICAN ARCHITECTS.—We have received "The Architects' Directory and Specification Index," being a Directory of names and addresses of architects in the United States, together with a list of manufacturers of material or appliances used in American building. The latter can hardly be of any use to English architects, but the Directory may be useful to those who wish to communicate with architects in the United States. It is published by Mr. W. T. Comstock, 23, Warren-street, New York.

ASPHALT FROM BUENOS AIRES.—Samples of asphalt from Los Garrapatiales have been forwarded through the Foreign Office to the Board of Trade by Mr. A. C. Ross, C.B., H.M. Consul at Buenos Aires, and have been placed on view at the Commercial Intelligence Branch of the Board of Trade, 73, Basinghall-street, E.C.

THE LOCAL GOVERNMENT ANNUAL.—The fifteenth yearly issue of the Local Government Annual and Official Directory (Farringdon-street, E.C.) has been sent to us. The main portion of this excellent little work is devoted to the Directory, which gives the names and addresses of the chief officials of all corporations, London borough councils, county councils, boards of guardians, urban and rural district councils, county and borough asylums, etc., throughout the kingdom, as well as the public libraries, public parks, and City companies of London. A feature which will be found useful is the insertion of the names of the chairmen of committees in the metropolitan boroughs, also the chairmen of the London County Council committees. Readers will find the telephone numbers of all those London boroughs which have adopted them. The names and addresses of the Metropolitan Water Board are also included, and accompanied by a complete scale of charges in every district supplied by the Board. The other section consists of a list of the various education committees in England and Wales. In addition to the directory there is information relating to the public libraries, baths and washhouses, and electric light undertakings in the boroughs of London, and the work includes an abstract of the local government legislation of 1904. There is also a complete list of all the parks and open spaces of the Metropolis, with the local authorities controlling them. The price of this handy and useful publication is 1s. 6d.

Legal.

ACTION BY AN ARCHITECT.

THE case of Neill & Sons *v.* Worthington & Co., Ltd., came before the Court of Appeal, consisting of Lords Justices Vaughan Williams, Stirling, and Sir Gorell Barnes, on the 25th ult., on the application of the defendants for judgment or new trial on appeal from verdict and judgment at trial before Mr. Justice Grantham and a special jury in the King's Bench Division.

Mr. Scott Fox, K.C., and Mr. Montague Lush, K.C., appeared for the appellants; and Mr. Tindal Atkinson, K.C., and Mr. Compston for the respondent.

It appeared from the statement of Mr. Scott Fox that the action was brought by the plaintiff, Mr. Neill, an architect, trading under the style of Neill & Sons at Leeds, against the defendants, the well-known brewers of Burton, to recover 56*l.* 6s. for work and labour done as it was alleged on the employment of the defendants. The defence was that there was no contract of employment between the plaintiff and the defendants at all and that the people whom the plaintiff really looked to for payment were Cattell & Gale, Ltd., spirit merchants. The work in respect of which the action was brought was that of making alterations at the Royal Exchange Restaurant, Leeds. At the trial the jury returned a verdict for the plaintiff and judgment was entered accordingly. The grounds of the present application were that the verdict was against the weight of the evidence, and that the learned judge had misdirected the jury.

In the result Lord Justice Vaughan Williams, in giving judgment, said he saw no evidence of any authority being given to anyone by the defendants to pledge their credit in the matter, and he saw no evidence to support the verdict of the jury. He thought the appeal must be allowed and judgment entered for the defendants.

Lord Justice Stirling and Sir Gorell Barnes concurred.

ACTION BY A QUANTITY SURVEYOR.

THE case of Clarke *v.* Brooker and others came before Mr. Justice Walton and a common jury in the King's Bench Division on the 30th ult., an action by Mr. Edmund Thos. Clarke, a quantity surveyor, against Priscilla Anne Brooker, J. W. G. Brooker, and A. E. Brooker, of Darlstone, Brockley Park, Forest Hill, the executors of the late James William Brooker, an architect, for 170*l.*, the alleged agreed amount for work and labour done by the plaintiff for and at the request and by the order of Mr. J. W. Brooker.

It appeared that the work in question was done in relation to the Imperial Hall, East Dulwich, the plaintiff's case being that the order for his employment was verbally given to him by the late Mr. Brooker on November 13, 1901, and again at the Imperial Hall on November 14, 1901.

The defence was a denial that Mr. J. W. Brooker ever employed the plaintiff as alleged or at all, or that he requested or ordered the plaintiff to do the work, or that he agreed to pay him 170*l.* or any sum whatever. Defendants also said that Mr. Brooker acted as sole agent for the Hall Finance Syndicate and not otherwise. Defendants also alternatively pleaded that if Mr. Brooker even employed the plaintiff it was an implied term of the employment that the plaintiff should perform his work within a reasonable time, and that plaintiff failed to perform his work within a reasonable time and his work was consequently of no value to Mr. Brooker.

Mr. J. F. P. Rawlinson, K.C., and Mr. Ritter appeared for the plaintiff, and Mr. Clavell Salter, K.C., and Mr. L. Davies for the defendants.

Mr. Rawlinson, having opened the case, called the plaintiff, who, examined, said that he was a quantity surveyor of twenty-three years' experience. He had acted both independently as quantity surveyor and as assistant to architects. He had known Mr. Brooker since 1886 and had had many previous dealings with him. He always acted as assistant so far as Mr. Brooker was concerned. At the end of 1901 he received a message asking him to call on Mr. Brooker, and on November 13, 1901, he called at his office. Mr. Brooker then told him that he wanted the job in question done, indicating what the job was by the plans on his desk. Witness said he would do it, and the arrangement was to meet on the works the following day, so that he could take Mr. Brooker's instructions—that was at the Imperial Hall, the job being measuring up extras and omissions under the contract. The building was not then complete, but was approaching completion. Witness met Mr. Brooker at the Hall, when the latter pointed out each item he required adjusted. Mr. Brooker gave him nothing but verbal instructions. From that time he proceeded to get on with the work. He measured up from day to day as much as they could get through. That went on until about April 1, at which date the whole of his account was done except the last four items which appeared in the summary. He went through the accounts with Mr. Brooker, but on April 23 Mr. Brooker said it appeared to him that witness had made out the account more in the interest of the builder than of his clients, the Hall Finance Syndicate. Witness felt very upset. Mr. Brooker then took hold of the papers, threw them up in the air, and told witness to take them away, and he did so. He saw Mr. Brooker from time to time after that and also Hopkins, the builder.

By his lordship: When he was employed in November, 1901, nothing was said about his remuneration. All he was told was that he was to get on with the work.

Examination continued,

His charges were fair and reasonable—2½ per cent. plus ½ per cent. for pricing would bring the amount to 186*l.* and then the amount for copying brought it to 190*l.* Witness only asked for the work 170*l.* Mr. Brooker thought that 150*l.* was enough, but the price was afterwards finally settled at 170*l.* Some time in 1903 he had a conversation with Mr. Brooker with reference to the creditors of the Syndicate accepting debentures instead of cash payments. Witness consented to accept debentures for the amount of his fees, but he never got the debentures.

Cross-examined by Mr. Davies, he did not at the time he undertook the work know that the Hall Finance Syndicate were the building owners, and Mr. Hopkins the builder. Mr. Brooker's position was that of architect.

Can you point to anything in writing showing that you made any claim on Mr. Brooker personally during his life?—There was a letter of June 23 in which I said I wanted 170*l.*

At this stage of the case Mr. Salter took up the cross-examination of the witness.

He soon found out that the building owners were the Syndicate. He thought the contract price for the building was about 8,000*l.*

What would be a reasonable amount of time for a competent quantity surveyor to measure up a variations bill such as this to the extent of about 6,000*l.*?—Provided that all the work was done and you could get all your appointments kept it would take from two to three months—that is, on such work as this was.

Mr. Salter informed his lordship that the ordinary practice was to add the total amount of the quantity surveyor's charges to the builder's total and the result was that the whole amount was paid by the building owner.

Cross-examination continued,

He had always looked to Mr. Brooker as being liable to pay his fees. He did not look to the Syndicate to pay him.

Plaintiff, in reply to further questions by Mr. Salter, said he always thought he would have to wait for his money until Mr. Brooker got paid. As Mr. Brooker would not pay him and neither would Mr. Hopkins, he applied to the Syndicate.

Did not Mr. Brooker say you should not have a penny, because of your delay in the matter?—No, it was in consequence of the remarks I made about this business.

Then, if you were entitled to the money from Mr. Brooker, why did you apply to the Syndicate?—I tried it as a last resource. In 1903 I repeatedly applied to Mr. Brooker for the money.

When you sent a letter to the Syndicate for the money did you consider yourself a creditor of the Syndicate?—I must have done, by the tone of the letter.

His lordship: When a quantity surveyor is employed by the building owner, according to the usual practice from whom does he get his money?—The common practice is to have these fees added to the account of the builder and paid to the builder by the building owner, and the builder sends on his cheque to the quantity surveyor.

Mr. Fredk. Henry Hopkins, a builder and contractor, employed in the building of the Imperial Hall, examined, said in April, 1902, when he saw Mr. Brooker, he said he wanted to settle up the plaintiff's account, but he declined to do it without plaintiff's figures. He then saw the plaintiff and got his figures, and these he communicated to Mr. Brooker.

This being the plaintiff's case, Mr. Salter, on behalf of the defendants, submitted that there was no evidence of any contract by Mr. Brooker personally to pay the plaintiff's account.

His lordship said it would be safer not to withdraw the case from the jury.

Mr. Salter, saying he had no evidence to call on behalf of the defendants, Mr. Ritter summed up the plaintiff's case to the jury.

Mr. Salter, in addressing the jury on behalf of the defendants, submitted that their verdict should be for his clients. He said it was clear that Mr. Brooker had never taken upon himself the responsibility of personally paying the plaintiff his account. On the plaintiff's own evidence he knew at an early stage that the Syndicate were the building owners, and the financial position of the Syndicate was well known to him. The correspondence clearly showed that plaintiff had looked to the Syndicate, and to the Syndicate alone, for his fees. The plaintiff had asked Mr. Brooker whether it was through him that the Syndicate were resisting his claim, and Mr. Brooker had replied that it was; as the plaintiff had been guilty of such delay in getting on with the work it was useless. The plaintiff had not dared to set up such a claim against Mr. Brooker during his life, and he confidently asked the jury for a verdict.

His lordship having summed up,

The jury found a verdict for the defendants, and his lordship entered judgment accordingly.

DAMAGE TO PROPERTY BY FLOODING.

On Saturday, the 27th ult., the Official Referee, Mr. Muir Mackenzie, delivered his judgment in the actions brought against the Ilford Gas Company by the Corporation of East Ham and the Ocean Accident Guarantee Corporation; actions brought by the respective plaintiffs against the defendants for damages for having negligently, as it was alleged, caused a large quantity of flood water to overflow the plaintiffs' property in June, 1903, from the River Roding and a stream called the Aldersbrook.

In the action brought by the Corporation of East Ham against the defendants the facts were these:—At the time of the commencement of the action the East Ham Urban District Council was the urban sanitary authority of the district which comprised the parishes of East Ham and Little Ilford, and by a charter granted in 1904 the district was incorporated as the borough of East Ham, and the property of the district devolved upon the plaintiffs. The defendants owned and occupied certain lands in the urban sanitary districts of Ilford and East Ham abutting upon the River Roding, the Aldersbrook passing through the defendants' lands on which they had erected gas works. Both the Roding and the Aldersbrook were crossed by the Romford-road, which ran east and west on a high bank to the north of the gas works and was carried over both channels by the bridges. There was also a channel between the Roding and the Aldersbrook parallel to Romford-road and immediately to the north of it. By their special Act, defendants were empowered to fill in part of the channel of the Aldersbrook inside their grounds, provided that if they closed any part of it southward from the Romford-road bridge within three years from the passing of the Act (1899) they should maintain, until the Barking-road bridge was re-constructed, a culvert having a diameter of 4 ft. 6 in. from the Aldersbrook to the River Roding through their own lands. The defendants made some changes in the channel of the Aldersbrook within their own grounds, leaving the culvert which was required by the Act, but in August, 1902, they closed up the culvert but did not close the arches of the bridge carrying the Romford-road over the Aldersbrook. Defendants also, for the purpose of laying gas mains, cut and reinstated, with an additional height of 1 ft., the river bank inside their grounds. They also raised the height of the island between the Roding and the Aldersbrook thus forming a sort of pit where any water would collect that might come under the Romford-road bridge along the Aldersbrook. In June, 1903, in consequence of a heavy rainfall, the water rushed along the Aldersbrook and collected on the defendants' ground by the bank of the Roding, the result being that the bank burst, which caused the damage complained of. The case for the East Ham Corporation was, that defendants were liable to maintain in repair the river bank inside their grounds as a protection against flooding, and that it had been weakened by the defendants carrying the gas mains through it and not properly reinstated, and, therefore, that they were liable for the damage caused by flooding. Defendants denied that they were liable to maintain in repair the river bank and that they had failed to keep their portion of the bank in repair. They also said that if any damage was caused to the plaintiffs it was through the overflow of the Aldersbrook, due to an act of God. At the trial, which took place before the Lord Chief Justice and a special jury in the King's Bench Division (reported in *The Builder* of July 15, 1905), the jury found that the defendants were guilty of negligence or want of reasonable care in closing the Aldersbrook and in reinstating the bank, and that the flooding was caused by both. They also found that the flooding could have been prevented by reasonable care, and on these findings his lordship gave judgment for the plaintiffs and directed that the amount of damages should be assessed by the Official Referee.

The action by the Ocean Accident Guarantee Corporation arose out of the same set of circumstances, it being an action by these plaintiffs, who were mortgagees of a number of houses erected near the defendants' works and which had been damaged by the flooding. These plaintiffs also secured a verdict in the King's Bench Division, and the question as to the amount of damages to be paid by the defendants to them was also referred to the Official Referee.

The Official Referee, in giving judgment in the first case, having stated the facts, said that after hearing all the evidence that had been given he was clear that his judgment must be for the plaintiffs. He did not intend to award a sum in respect of each item claimed for by the plaintiffs, but a lump sum to cover the whole. Plaintiffs claimed some 345*l.* in respect of damage done by the water to five roadways and the footways. They said that was the amount they had expended in repairs. Plaintiffs claimed for cleansing sewers and many such minor things, but in his opinion one must take a broad view of the matter and see if the plaintiffs were put to an unusual expense in consequence of the floods. In his opinion the plaintiffs' claim was altogether unreasonable and was founded upon a wrong principle. In view of all the circumstances, the total sum he should award the plaintiffs was 120*l.* with proportionate costs. In the second case the learned Official Referee said the plaintiffs claimed some thousands of pounds for damage done to their property and depreciation in value. He found that the houses were built upon marsh land, unsuitable for houses unless special precautions were taken, and those precautions were not taken. He held that there had been no depreciation, and he assessed the sum to be paid by the Gas Company to the plaintiffs at 156*l.* 15*s.* as sufficient to satisfy their claim for damages.

PATENTS OF THE WEEK.

APPLICATIONS PUBLISHED.*

408 of 1905.—J. E. NELSON and C. G. NELSON: *Stove Pipe Ventilators.*

This relates to a stove pipe ventilator, consisting of an open-ended tube provided at its forward end with an external annular flange set obliquely upon it, an elastic hook which projects from the flange, and a damper for the flanged end of the tube.

810 of 1905.—P. W. LOCKWOOD and G. & J. WEIR, LTD.: *Couplings and Fastenings for Steam Heating Tubes and the like.*

This relates to a steam heating tube and the like, and consists of a cylindrical metal coupling, comprising three separable parts—namely, a barrel part with closed end having perforations therein, an integral shoulder with mechanical face, and an open screwed end and tubular screwed extension piece therefor, also a solid screwed neck and fixing nut therefor.

1,387 of 1905.—L. ANIDJAH and D. D. REES: *Apparatus for Lowering Persons or Goods from Buildings and chiefly Designed for Use in case of Fire.*

This relates to an apparatus for lowering persons or goods from buildings, and comprises two bars jointed together at one end, one of which is pivoted to the sill of the window frame whilst the other is designed to engage with a hook or its equivalent on the said frame, and a block carried by the bars and supporting a rope for lowering the persons or goods.

1,799 of 1905.—W. A. MOORE: *Siphon Flushing Apparatus for Water-closets, Urinals, Sewers, Drains, and the like.*

This relates to a siphon flushing apparatus having a tank or cistern for holding the water or other fluid, and a vertically arranged discharge or outlet pipe fitted therein, and consists of a ring or cylindrical piece fixed round the upper end of said discharge pipe, a plurality of annular grooves round said ring, a short concentric pipe slidably mounted on said ring, a further concentric pipe surrounding the discharge pipe and forming the annular space round the inner concentric pipe and a cover fitted to the upper end of the outer concentric pipe in such a way that the annular space between the concentric pipes communicates with the interior of the inner concentric pipe at the top.

5,025 of 1905.—W. H. FITTON: *Machinery for Sawing Stone, Slate, Granite, Marble, and the like.*

This relates to sawing machinery for stone and the like, comprising a circular saw, mounted at or close to one end of a spindle and carried in bearings fixed to a travelling carriage or saddle, which is adapted to slide on a bridge slide, bed, or way parallel to the plane of the saw, and is characterised by said travelling carriage or saddle carrying an electric motor on said spindle, or geared to said spindle, and geared to the feed mechanism, which is also carried on said carriage or saddle, for moving said carriage or saddle along said bridge slide, bed, or way.

5,209 of 1905.—A. W. BAXTER: *Solution for Rendering Combustible Materials Fire-resisting.*

This relates to a solution for rendering combustible materials fire-resisting, and consists of an impregnating solution obtained by dissolving phosphate of ammonia with boracic acid in water.

9,620 of 1905.—G. T. WINNARD and J. BEDFORD: *Pulley Blocks.*

This relates to a pulley block and consists of an arch-shaped grooved rope support, carried by the lower block, either alone or in conjunction with a second grooved rope support carried by the upper block.

12,046 of 1905.—E. G. PERROT: *Reinforced Concrete Constructions.*

This relates to means for reinforcing a concrete or cement construction, comprising a plurality of bars, each having a series of main elements united by web portions integral with said bars, said web portions being partially separated at intervals, by shearing or other means, from said elements, the separated portions being bent at an angle to the main elements to form stirrups.

15,162 of 1905.—A. SENN: *Roofs for Hot-houses.*

This relates to roofs for hot-houses and consists of a girder with channel irons for the insertion of glass plates, and removable wood back, covering the inwardly projecting part of the girder.

17,846 of 1905.—J. MITCHELL: *Air-tight Covers and Frames for Inspection Chambers.*

This relates to air-tight covers and frames for inspection chambers, and consists in the employment of T-shaped nuts fitting into similarly-shaped slots or recesses in the frames, in combination with bolts passing through rebated holes in the covers and screwing into such nuts.

---

* All these applications are in the stage in which opposition to the grant of Patents upon them can be made.

1,922 of 1905.—N. JOHNSON: *Apparatus for Cutting or Excavating Trenches.*

This relates to an apparatus for cutting or excavating trenches, and consists in the combination of a motor-driven carriage, a suspended frame adjustable vertically thereon, a rotary boring head mounted in a carriage so as to be slidable upon the said frame, and an elevator and means for adjusting the position of the said suspended frame and for automatically and vertically feeding and rotating the said boring head.

4,218 of 1905.—W. M. DUCKER: *Roofs for Portable Houses.*

This relates to a portable house roof having independently constructed roof sections of wood, sheets of metal, covering the respective roof sections, and secured thereto prior to the sections being placed in position on the roof, each of said sheets having marginal lips to retain a batten, and flanged sheet metal battens engaging said lips and covering the joints between the sections.

5,711 of 1905.—F. W. MAXWELL: *Construction of Fire-proof Curtains for Theatres and like places of Amusement.*

This relates to the construction of fire-proof curtains for theatres and the like places of amusement, and consists in the combination of an open metal frame filled in with "plate wall slabs" or other like fire-proof material and provided at each side with trolley tracks running in vertical grooves made in the side walls of the proscenium opening.

8,104 of 1905.—L. P. FRIESTEDT: *Construction of Sea-walls, Breakwaters, and the like.*

This relates to a sea-wall, and comprises a series of metal piling sections consisting of channel beams arranged alternately so that their flanged edges interlock, each beam section being provided with Z-irons rigidly secured thereto so as to prevent lateral displacement when the piling sections thus assembled are driven into the earth to a solid foundation, the upper ends of the sections extending above the water line.

8,105 of 1905.—L. P. FRIESTEDT: *Construction of Coffer-dams, Caissons, and the like.*

This relates to coffer-dams and other structures of similar character, composed of metal sheet piling sections, and consists in the employment of channel beams arranged alternately so that their flanged edges interlock, each alternate beam section being provided with interlocking Z beams for loosely locking the said sections together and preventing separation when the said sections are driven into place, the arrangement being such that a continuous wall structure is formed.

172 of 1905.—A. BRUCE: *Siphon Cisterns.*

This relates to a siphon cistern, and consists in the combination of an air inlet valve which is operated automatically by means of a ball or float lever, said valve being connected by means of a pipe with some place outside the lavatory so that the noise caused by the inrush of air shall not be heard loudly within the lavatory or water-closet itself.

173 of 1905.—A. BRUCE: *Siphon Flushing Cisterns.*

This relates to a siphon flushing cistern, which is provided with a water tap or seal whereby the air can be locked in the short leg of the siphon or in a chamber connected therewith. An air escape valve is also provided and this valve is operated by means of a ball or float lever or its equivalent thereof.

451 of 1905.—R. CROSTHWAITE: *Stoves for Heating Rooms and the like.*

This relates to stoves for heating rooms and the like, and consists in the mode of operating the canopy and the arrangement of parts in connexion therewith in which the said canopy is adapted by its form and the combination therewith of a protector plate to serve both as a front hood or a back hood and is mounted on hinges at its bottom corners.

SOME RECENT SALES OF PROPERTY:

ESTATE EXCHANGE REPORT.

January 16.—By ORGILL, MARKS, & BARLEY (at Mason's' Hall Tavern).

Oxford-st.—Woodstock-st., "The Woodstock" p.h., u.t. 34½ yrs., y.r. 115*l.*, with goodwill.. £5,000

January 22.—By THOMAS, PEYER, & MILES.

Thames Ditton, Surrey.—Gigg's Hill, "The Brewery," f. (as a going concern) 3,000

Ashwell, Herts.—"The Stag's Head" b.h., and house adjoining, f. 1,000

Bennington, Herts.—"The White Horse" b.h. f. 600

Beachwood Green, Beds.—"The Red Lion" b.h., f. 1,200

"The Sugar Loaf" b.h., c. 800

Luton, Beds.—Windmill-st., "The Yorkshire Grey" p.h., f. 1,500

Hastings-st., "The Jolly Butcher's" p.h., f... 750

Steeple Morden, Cambs.—"The Fox" b.h., f... 450

Stotfold, Beds.—Arlesley-rd., "The White Swan" b.h., f. 450

"The Pig and Whistle" b.h., f. 900

Symonds Green, Herts.—"The Crooked Billet" b.h., f. 1,200

January 23.—By M. HOLMES & SONS.

Cricklewood.—51, Ashford-rd., u.t. 87 yrs., g.r. 5*l.* 8s., e.r. 38*l.* £315

By ERNEST OWERS.

Cricklewood.—84, 86, 88, and 90, Ivy-rd., u.t. 93½ yrs., g.r. 23*l.* 9s., e.r. 158*l.* 1,490

By SIMPSON & MOORE.

New Cross.—79, Gellatly-rd., u.t. 55½ yrs., g.r. 5*l.* 5s., y.r. 32*l.* 325

By FLEURET, SONS, & ADAMS (at Masons' Hall Tavern).

Edgware-rd.—No. 8, "The New Inn," u.t. 15 yrs., y.r. 250*l.*, with goodwill 8,550

January 24.—By DAVID BURNETT & Co.

Wimbledon.—19 to 25 (odd), The Ridgway, u.t. 38 yrs., g.r. 18*l.* 16s., y.r. 180*l.* 1,100

By FURBERS'.

Fulham.—37, 50, and 52, Clonmel-rd., u.t. 87½ yrs., g.r. 21*l.*, y.r. 122*l.* 1,395

33, 35, and 39, Campana-rd., u.t. 74 yrs., g.r. 15*l.*, w.r. 107*l.* 18s. 780

By HOBSON, RICHARDS, & Co.

Clapton.—Clapton Common, l.g.r. 280*l.*, reversion in 65 yrs. (in lots) 6,605

By TOPLIS & HARDING.

Deptford.—102, High-st. (s.), f., y.r. 60*l.* 1,300

Stepney.—17, Great Prescott-st., f., y.r. 90*l.* .. 1,600

Poplar.—29, 31, 33, and 35, Alfred-st., u.t. 40½ yrs. g.r. 22*l.*, w.r. 140*l.* 8s. 500

Bethnal Green.—3, 4, 5, and 6, Totty-st., u.t. 44½ yrs., g.r. 12*l.* 12s., w.r. 135*l.* 4s. 750

Caledonian-rd.—No. 190 (s.), u.t. 38½ yrs., g.r. 4*l.*, y.r. 65*l.* 650

January 25.—By CHESTERTON & SONS.

Westminster.—52, Vincent-sq., u.t. 55½ yrs., g.r. 11*l.*, y.r. 68*l.* 710

By C. RAWLEY CROSS & Co.

Notting Hill.—18, St. Ann's-rd., u.t. 44 yrs., g.r. 6*l.*, w.r. 63*l.* 14s. 275

Hackney.—107, 109, 111, Albion-rd., u.t. 40 yrs., g.r. 15*l.*, y.r. 115*l.* 16s. 820

Bethnal Green.—16, 18, and 20, Palm-st., u.t. 26 yrs., g.r. 35*l.* 19s., w.r. 104*l.* 490

By NEWBON, EDWARDS, & SHEPHARD.

Regent's Park.—18, St. George's-sq., u.t. 31 yrs., g.r. 15*l.*, e.r. 60*l.* 300

Barnsbury.—13, Denmark-st., u.t. 13½ yrs., g.r. 6*l.*, y.r. 36*l.* 150

Pentonville.—1 and 3, Rodney-st., u.t. 39 yrs., g.r. 40*l.*, w.r. 139*l.* 2s. 235

Barnsbury.—128, Barnsbury-rd., u.t. 23½ yrs., g.r. 7*l.*, y.r. 46*l.* 200

51, Cloudesley-rd., with stabling, u.t. 11½ yrs., g.r. 4*l.*, e.r. 43*l.* 105

Tottenham.—42, Russell-rd., u.t. 70½ yrs., g.r. 5*l.*, e.r. 32*l.* 10s. 155

Ealing.—3, Manor-rd. (s.), u.t. 94 yrs., g.r. 10*l.* 10s., y.r. 70*l.* 700

Basildon, Essex.—"Thames View," and nearly two acres, f., p. 330

January 26.—By MAY & PHILPOT.

Streatham.—106 to 126 (even), Wellfield-rd., u.t. 58 yrs., g.r. 42*l.* 10s., w.r. 299*l.* 2,200

Contractions used in these lists.—F.g.r. for freehold ground-rent; l.g.r. for leasehold ground-rent; i.g.r. for improved ground-rent; g.r. for ground-rent; r. for rent; f. for freehold; c. for copyhold; l. for leasehold; p. for possession; e.r. for estimated rental; w.r. for weekly rental; q.r. for quarterly rental; y.r. for yearly rental; u.t. for unexpired term; p.a. for per annum; yrs. for years; la. lane; st. for street; rd. for road; sq. for square; pl. for place; ter. for terrace; cres. for crescent; av. for avenue; gdns. for gardens; yd. for yard; gr. for grove; b.h. for beerhouse; p.h. for public-house; o. for offices; s. for shops; ct. for court.

TERMS OF SUBSCRIPTION.

"THE BUILDER" (Published Weekly) is supplied DIRECT from the Office to residents in any part of the United Kingdom at the rate of 19s. per annum (52 numbers) PREPAID. To all parts of Europe, America, Australia, New Zealand, India, China, Ceylon, etc., 29s. per annum.

Remittances (payable to J. MORGAN) should be addressed to The Publisher of "THE BUILDER," Catherine-street, W.C.

SUBSCRIBERS in LONDON and the SUBURBS, by prepaying at the Publishing Office 19s. per annum (52 numbers) or 4s. 9d. per quarter (13 numbers), can ensure receiving "The Builder" by *Friday Morning's Post.*

MEETINGS.

FRIDAY, FEBRUARY 2.

Junior Institution of Engineers.—Mr. K. Edgcumbe on "Some Recent Electrical Engineering Measuring Instruments." 8 p.m.

SATURDAY, FEBRUARY 3.

Sanitary Inspectors' Association.—Twenty-third annual dinner, Holborn Restaurant. 6 p.m.

Clerks of Works Association.—The twenty-third annual dinner, at the Criterion Restaurant. 6.15 p.m.

MONDAY, FEBRUARY 5.

Royal Institute of British Architects.—Seventh General Meeting (Ordinary) of the Session. (1) To announce the name of the person the Council propose to submit as a fit recipient of the Royal Gold Medal, 1906; (2) the President, Mr. John Belcher, A.R.A., to deliver an address to students; (3) Mr. J. W. Simpson to read a criticism of the works submitted for the prizes and studentships, 1905-6; (4) presentation of prizes by the President. 8 p.m.

Liverpool Architectural Society.—Professor C. H. Reilly, M.A., on "Michelangelo's Work at San Lorenzo, and in the Sistine Chapel," illustrated by lantern slides. 6 p.m.

Society of Engineers.—The President for the past year, Mr. Nicholas J. West, will present the premiums awarded for papers read during the year. The President for the year 1906, Mr. Maurice Wilson, will deliver his inaugural address. 7.30 p.m.

London Institution.—Mrs. Burton-Brown on "The Development of Sculpture in Greece and Rome," illustrated 5 p.m.

Clerks of Works Association.—Monthly Meeting, Carpenters' Hall. 7.30 p.m.

TUESDAY, FEBRUARY 6.

Institution of Civil Engineers.—Paper to be further discussed: "The Railway-gauges of India," by Mr. F. R. Upcott, C.S.I. 8 p.m.

WEDNESDAY, FEBRUARY 7.

Society of Arts.—Mr. Leon Gaster on "Progress in Electric Lighting." 8 p.m.

Edinburgh Architectural Association.—Mr. A. R. Myers on "Theory of Construction." 8 p.m.

Builders' Foremen and Clerks of Works' Institution.—Ordinary Meeting of the Members. 8 p.m.

THURSDAY, FEBRUARY 8.

Institution of Electrical Engineers.—(1) Conclusion of discussion on Mr. F. W. Carter's paper on "Technical Considerations in Electric Railway Engineering"; (2) Mr. Claude W. Hill on "Crane Motors and Controllers." 8 p.m.

FRIDAY, FEBRUARY 9.

Royal Institution.—Mr. H. F. Newall, M.A., F.R.S., on "Eclipse Problems and Observations." 9 p.m.

Architectural Association.—Rev. G. H. West, A.R.I.B.A., on "Differences between English and French Gothic Art." 7.30 p.m.

Institution of Civil Engineers (Students' Meeting.)—Mr. R. H. Mackie on "Electric Driving at the Locomotive-works of the North London Railway." 8 p.m.

SATURDAY, FEBRUARY 10.

Junior Institution of Engineers.—Twenty-second Anniversary Dinner at the Hotel Cecil, 6.30 for 7 p.m. The President, Mr. Dugald Clerk, M.Inst.C.E., F.C.S., in the Chair.

Architectural Association.—Second spring visit, to Messrs. Waring & Gillow's new premises, Oxford-street. 2 p.m.

TO CORRESPONDENTS.

NOTE.—The responsibility of signed articles, letters, and papers read at meetings rests, of course, with the authors.

We cannot undertake to return rejected communications; and the Editor cannot be responsible for drawings, photographs, manuscripts, or other documents, or for models or samples, sent to or left at this office, unless he has specially asked for them.

Letters or communications (beyond mere news items) which have been duplicated for other journals are NOT DESIRED.

All communications must be authenticated by the name and address of the sender whether for publication or not. No notice can be taken of anonymous communications.

We are compelled to decline pointing out books and giving addresses.

Any commission to a contributor to write an article, or to execute or lend a drawing for publication, is given subject to the approval of the article or drawing, when received, by the Editor, who retains the right to reject it if unsatisfactory. The receipt by the author of a proof of an article in type does not necessarily imply its acceptance. The Editor cannot undertake to read and consider articles offered for acceptance unless they are type-written.

All communications regarding literary and artistic matters should be addressed to THE EDITOR; those relating to advertisements and other exclusively business matters should be addressed to THE PUBLISHER, and not to the Editor.

PRICES CURRENT OF MATERIALS.

*** Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

	£	s.	d.			
BRICKS, &c.						
Hard Stocks	1	7	0	per 1000	alongside,	in river.
Rough Stocks and Grizzles	1	4	0	,,	,,	,,
Facing Stocks	1	16	0	,,	,,	,,
Shippers	2	0	0	,,	,,	,,
Flettons	1	5	6	,,	at railway depôt.	
Red Wire Cuts	1	11	0	,,	,,	,,
Best Fareham Red	3	12	0	,,	,,	,,
Best Red Pressed Ruabon Facing	5	0	0	,,	,,	,,
Best Blue Pressed Staffordshire	4	1	0	,,	,,	,,
Do. Bullnose	4	6	6	,,	,,	,,
Best Stourbridge Fire Bricks	3	15	6	,,	,,	,,
GLAZED BRICKS.						
Best White and Ivory Glazed Stretchers	12	0	0	,,	,,	,,
Headers	11	0	0	,,	,,	,,
Quoins, Bullnose, and Flats	16	0	0	,,	,,	,,
Double Stretchers	19	0	0	,,	,,	,,
Double Headers	16	0	0	,,	,,	,,
One Side and two Ends	19	0	0	,,	,,	,,
Two Sides and one End	20	0	0	,,	,,	,,
Splays, Chamferred, Squints	20	0	0	,,	,,	,,
Best Dipped Salt Glazed Stretchers, and Header	12	0	0	,,	,,	,,
Quoins, Bullnose, and Flats	14	0	0	,,	,,	,,
Double Stretchers	15	0	0	,,	,,	,,
Double Headers	14	0	0	,,	,,	,,
One Side and two Ends	15	0	0	,,	,,	,,
Two Sides and one End	15	0	0	,,	,,	,,
Splays, Chamferred, Squints	14	0	0	,,	,,	,,
Second Quality White and Dipped Salt Glazed	2	0	0	,,	less than best.	

	s.	d.	
Thames and Pit Sand	6	9	per yard, delivered.
Thames Ballast	5	3	,, ,,
Best Portland Cement	26	0	per ton, ,,
Best Ground Blue Lias Lime	19	0	,, ,,

NOTE.—The cement or lime is exclusive of the ordinary charge for sacks.

Grey Stone Lime ..... 11s. 0d. per yard, delivered.
Stourbridge Fireclay in sacks 27s. 0d. per ton at rly. dpt.

STONE.

	s.	d.	
BATH STONE—delivered on road waggons, Paddington Depôt	1	6½	per ft. cube.
Do. do. delivered on road waggons, Nine Elms Depôt	1	8½	„ „
PORTLAND STONE (20 ft. average)—Brown Whitbed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2	1	„ „
White Basebed, delivered on road waggons, Paddington Depôt, Nine Elms Depôt, or Pimlico Wharf	2	2½	„ „

	s.	d.		
Ancaster in blocks	1	10	per ft. cube,	deld. rly. depôt.
Beer „	1	6	„	„
Greenshill „	1	10	„	„
Darley Dale in blocks	2	4	„	„
Red Corsehill „	2	2	„	„
Closeburn Red Freestone	2	0	„	„
Red Mansfield „	2	4	„	„

YORK STONE—*Robin Hood Quality.*

Scappled random blocks.	2	10	„	„
6 in. sawn two sides landings to sizes (under 40 ft. super.)	2	3	per ft. super.,	„
6 in. rubbed two sides ditto, ditto	2	6	„	„
3 in. sawn two sides slabs (random sizes)	0	11½	„	„
2 in. to 2½ in. sawn one side slabs (random sizes)	0	7½	„	„
1½ in. to 2 in. ditto, ditto	0	6	„	„

HARD YORK—

Scappled random blocks.	3	0	per ft. cube,	„
in. sawn two sides landings to sizes (under 40 ft. super.)	2	8	per ft. super.,	„
6 in. rubbed two sides ditto	3	0	„	„
3 in. sawn two sides slabs (random sizes)	1	2	„	„
2 in. self-faced random flags	0	5	„	„

	s.	d.		
Hopton Wood (Hard Bed) in blocks	2	0	per ft. cube,	deld. rly. depôt.
„ „ „ 6 in. sawn both sides landings	2	7	per ft. super.	deld. rly. depôt.
„ „ „ 3 in. sawn both sides random slabs	1	0	„	„
„ „ „ 2 in. do.	0	8½	„	„

SLATES.

In. In.	£	s.	d.	
20×10 best blue Bangor	13	2	6	per 1000 of 1200 at r. d.
20×12 „ „	13	17	6	„ „
20×10 first quality „	13	0	0	„ „
20×12 „ „	18	15	0	„ „
16×8 „ „	7	5	0	„ „
20×10 best blue Portmadoc	12	12	6	„ „
16×8 „ „	6	12	6	„ „
20×10 best Eureka unfading green	15	17	6	„ „
20×12 „ „	18	7	6	„ „
18×10 „ „	13	5	0	„ „
16×8 „ „	10	5	0	„ „
20×10 permanent green	11	12	6	„ „
18×10 „ „	9	12	6	„ „
16×8 „ „	6	12	6	„ „

TILES.

	s.	d.		
Best plain red roofing tiles	42	0	per 1000 at rly. depôt.	
Hip and Valley tiles	3	7	per doz.	„
Best Broseley tiles	50	0	per 1000	„
Do. Ornamental tiles	52	6	„	„
Hip and Valley tiles	4	0	per doz.	„
Best Ruabon red, brown, or brindled do. (Edwards)	57	6	per 1000	„
Do. Ornamental do.	60	0	„	„
Hip tiles	4	0	per doz.	„
Valley tiles	3	0	„	„
Best Red or Mottled Staffordshire do. (Peakes)	51	9	per 1000	„
Do. Ornamental do.	54	6	„	„
Hip tiles	4	1	per doz.	„
Valley tiles	3	8	„	„
Best "Rosemary" brand plain tiles	48	0	per 1000	„
Best Ornamental tiles	50	0	„	„
Hip tiles	4	0	per doz.	„
Valley tiles	3	8	„	„
Best "Hartshill" brand plain tiles, sand-faced	50	0	per 1000	„
Do. pressed	47	6	„	„
Do. Ornamental do.	50	0	„	„
Hip tiles	4	0	per doz.	„
Valley tiles	3	6	„	„

WOOD.

BUILDING WOOD.

	At per standard. £	s.	d.		£	s.	d.
Deals: best 3 in. by 11 in. and 4 in. by 9 in. and 11 in.	13	10	0	...	15	0	0
Deals: best 3 by 9	13	0	0	...	14	0	0
Battens: best 2½ in. by 7 in. and 8 in., and 3 in. by 7 in. and 8 in.	11	0	0	...	12	0	0
Battens: best 2½ by 6 and 3 by 6	0	10	0	less than 7 in. and 8 in.			
Deals: seconds	1	0	0	less than best.			
Battens: seconds	0	10	0	„ „			
2 in. by 4 in. and 2 in. by 6 in.	9	0	0	...	10	0	0
2 in. by 4½ in. and 2 in. by 5 in.	8	10	0	...	9	10	0
Foreign Sawn Boards—1 in. and 1¼ in. by 7 in.	0	10	0	more than battens,			
¾ in.	1	0	0	„			
Fir timber: best middling Danzig or Memel (average specification)	At per load of 50 ft. 4	10	0	...	5	0	0
Seconds	4	0	0	...	4	10	0
Small timber (8 in. to 10 in.)	3	12	6	...	3	15	0
Small timber (6 in. to 8 in.)	3	0	0	...	3	10	0
Swedish balks	2	10	0	...	3	0	0
Pitch-pine timber (30 ft. average)	3	5	0	...	3	15	0

WOOD (continued).

JOINERS' WOOD.

	At per standard. £	s.	d.		£	s.	d.
White Sea: first yellow deals, 3 in. by 11 in.	24	0	0	...	25	0	0
3 in. by 9 in.	22	0	0	...	23	0	0
Battens, 2½ in. and 3 in. by 7 in.	16	10	0	...	18	0	0
Second yellow deals, 3 in. by 11 in.	18	10	0	...	20	0	6
„ „ 3 in. by 9 in.	17	10	0	...	19	0	0
Battens, 2½ in. and 3 in. by 7 in.	13	10	0	...	14	10	0
Third yellow deals, 3 in. by 11 in. and 9 in.	13	10	0	...	15	0	0
Battens, 2½ in. and 3 in. by 7 in.	11	0	0	...	12	0	0
Petersburg: first yellow deals, 3 in. by 11 in.	21	0	0	...	22	10	0
Do. 3 in. by 9 in.	18	0	0	...	19	10	0
Battens	13	10	0	...	15	0	0
Second yellow deals, 3 in. by 11 in.	16	0	0	...	17	0	0
Do. 3 in. by 9 in.	14	10	0	...	16	0	0
Battens	11	0	0	...	12	10	0
Third yellow deals, 3 in. by 11 in.	13	0	0	...	14	0	0
Do. 3 in. by 9 in.	12	10	0	...	14	0	0
Battens	10	0	0	...	11	0	0
White Sea and Petersburg—First white deals, 3 in. by 11 in.	14	10	0	...	15	10	0
„ „ 3 in. by 9 in.	13	10	0	...	14	10	0
Battens	11	0	0	...	12	0	0
Second white deals, 3 in. by 11 in.	13	10	0	...	14	10	0
„ „ 3 in. by 9 in.	12	10	0	...	13	10	0
„ „ battens	10	0	0	...	11	0	0
Pitch-pine: deals	16	10	0	...	20	0	0
Under 2 in. thick extra	0	10	0	...	1	0	0
Yellow Pine—First, regular sizes	44	0	0	upwards.			
Oddments	32	0	0	„			
Seconds, regular sizes	33	0	0	„			
Yellow Pine oddments	28	0	0	„			
Kauri Pine—Planks, per ft. cube	0	3	6	...	0	5	0
Danzig and Stettin Oak Logs—Large, per ft. cube	0	3	0	...	0	3	6
Small „ „	0	2	6	...	0	2	9
Wainscot Oak Logs, per ft. cube	0	5	0	...	0	5	6
Dry Wainscot Oak, per ft. sup. as inch	0	0	8	...	0	0	9
¾ in. do. do.	0	0	7	...	—		
Dry Mahogany—Honduras, Tabasco, per ft. super. as inch	0	0	9	...	0	1	0
Selected, Figury, per ft. super. as inch	0	1	6	...	0	2	6
Dry Walnut, American, per ft. super. as inch	0	0	10	...	0	1	0
Teak, per load	17	0	0	...	22	0	0
American Whitewood Planks, per ft. cube	0	4	0	...	0	5	0

Prepared Flooring, etc.—

	Per square. £	s.	d.		£	s.	d.
1 in. by 7 in. yellow, planed and shot	0	13	6	...	0	17	6
1 in. by 7 in. yellow, planed and matched	0	14	0	...	0	18	0
1¼ in. by 7 in. yellow, planed and matched	0	16	0	...	1	0	0
1 in. by 7 in. white, planed and shot	0	12	0	...	0	14	6
1 in. by 7 in. white, planed and matched	0	12	6	...	0	15	0
1¼ in. by 7 in. white, planed and matched	0	15	0	...	0	16	6
¾ in. by 7 in. yellow, matched and beaded or V-jointed brds.	0	11	0	...	0	13	6
1 in. by 7 in. „ „	0	14	0	...	0	18	0
¾ in. by 7 in. white „ „	0	10	0	...	0	11	6
1 in. by 7 in. „ „ „	0	12	9	...	0	15	0

6 in. at 6d. to 9d. per square less than 7 in.

JOISTS, GIRDERS, &c.

	In London, or delivered Railway Vans, £	s.	d.		per ton. £	s.	d.
Rolled Steel Joists, ordinary sections	6	15	0	...	7	10	0
Compound Girders, ordinary sections	8	5	0	...	9	5	0
Steel Compound Stanchions	10	17	6	...	11	7	6
Angles, Tees, and Channels, ordinary sections	8	5	0	...	9	5	0
Flitch Plates	8	10	0	...	9	0	0
Cast Iron Columns and Stanchions including ordinary patterns	7	0	0	...	8	0	0

METALS.

	Per ton, in London. £	s.	d.		£	s.	d.
IRON—Common Bars	8	0	0	...	8	10	0
Staffordshire Crown Bars, good merchant quality	8	10	0	...	9	0	0
Staffordshire "Marked Bars"	10	0	0	...	—		
Mild Steel Bars	8	15	0	...	9	0	0
Hoop Iron, basis price	9	5	0	...	9	10	0
„ „ Galvanised	17	0	0	...	—		
(*And upwards, according to size and gauge.)							
Sheet Iron Black—Ordinary sizes to 20 g.	9	10	0	...	—		
„ „ 24 g.	10	10	0	...	—		
„ „ 26 g.	12	0	0	...	—		
Sheet Iron, Galvanised, flat, ordinary quality—Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	14	0	0	...	—		
Ordinary sizes to 22 g. and 24 g.	14	10	0	...	—		
„ „ 26 g.	15	0	0	...	—		
Sheet Iron, Galvanised, flat, best quality—Ordinary sizes to 20 g.	17	0	0	...	—		
„ „ 22 g. and 24 g.	17	10	0	...	—		
„ „ 26 g.	19	0	0	...	—		
Galvanised Corrugated Sheets—Ordinary sizes 6 ft. to 8 ft. 20 g.	13	10	0	...	—		
„ „ 22 g. and 24 g.	14	0	0	...	—		
„ „ 26 g.	15	5	0	...	—		
Best Soft Steel Sheets, 6 ft. by 2 ft. to 3 ft. by 20 g. and thicker	11	10	0	...	—		
Best Soft Steel Sheets, 22 g. & 24 g.	12	10	0	...	—		
„ „ 26 g.	14	15	0	...	—		
Cut Nails, 3 in. to 6 in.	9	10	0	...	9	15	0

(Under 3 in., usual trade extras.)

	Per ton, in London. £	s.	d.		£	s.	d.
LEAD, &c.—Sheet, English, 3lb. and up.	19	5	0	...	—		
Pipe in coils	19	15	0	...	—		
Soil pipe	22	5	0	...	—		
Compo pipe	22	5	0	...	—		
ZINC—Sheet—Vieille Montagne ton	33	10	0	...	—		
Silesian	33	10	0	...	—		

LEAD, &c. (continued)—

	Per ton, in London. £	s.	d.		£	s.	d.
COPPER—Strong Sheet per lb.	0	1	0	...	—		
Thin „	0	1	1	...	—		
Copper nails „	0	0	11	...	—		
BRASS—Strong Sheet „	0	0	11	...	—		
Thin „	0	1	0	...	—		
TIN—English Ingots „	0	1	8	...	—		
SOLDER—Plumbers' „	0	0	8	...	—		
Tinmen's „	0	0	10	...	—		
Blowpipe „	0	0	11	...	—		

ENGLISH SHEET GLASS IN CRATES.

15 oz. thirds	2½d.	per ft.	delivered
„ fourths	1½d.	„	„
21 oz. thirds	3½d.	„	„
„ fourths	2½d.	„	„
26 oz. thirds	4½d.	„	„
„ fourths	3½d.	„	„
32 oz. thirds	5½d.	„	„
„ fourths	5d.	„	„
Fluted Sheet, 15 oz.	3½d.	„	„
„ 21 oz.	4½d.	„	„
½ Hartley's Rolled Plate	2d.	„	„
⅝ „ „ „	2½d.	„	„
¾ „ „ „	2½d.	„	„
Figured and Oxford Rolled Oceanic, etc. white	4d.	„	„
„ „ „ tinted	5½d.	„	„

OILS, &c.

		£	s.	d.
Raw Linseed Oil in pipes	per gallon	0	1	11
„ „ „ in barrels	„	0	2	0
„ „ „ in drums	„	0	2	2
Boiled „ „ in pipes	„	0	2	1
„ „ „ in barrels	„	0	2	2
„ „ „ in drums	„	0	2	4
Turpentine in barrels	„	0	4	0
„ in drums	„	0	4	2
Genuine Ground English White Lead	per ton	22	10	0
Red Lead, Dry	„	21	10	0
Best Linseed Oil Putty	per cwt.	0	6	6
Stockholm Tar	per barrel	1	12	0

VARNISHES, &c.

	Per gallon. £	s.	d.
Fine Pale Oak Varnish	0	8	0
Pale Copal Oak	0	10	6
Superfine Pale Elastic Oak	0	12	6
Fine Extra Hard Church Oak	0	10	0
Superfine Hard-drying Oak, for seats of Churches	0	14	0
Fine Elastic Carriage	0	12	6
Superfine Pale Elastic Carriage	0	16	0
Fine Pale Maple	0	16	0
Finest Pale Durable Copal	0	18	0
Extra Pale French Oil	1	1	0
Eggshell Flatting Varnish	0	15	0
White Copal Enamel	1	4	0
Extra Pale Paper	0	12	0
Best Japan Gold Size	0	10	6
Best Black Japan	0	16	0
Oak and Mahogany Stain	0	9	0
Brunswick Black	0	8	0
Berlin Black	0	16	0
Knotting	0	10	0
French and Brush Polish	0	10	0

PUBLISHER'S NOTICES.

Nat. Tel., 6113, Gerrard. Telegrams, "The Builder, London."

THE INDEX (with TITLE-PAGE) for VOLUME LXXXIX. (July to December, 1905) was given as a supplement with the issue of January 13th.

CLOTH CASES for Binding the Numbers are now ready; price 2s. 6d. each; also

READING CASES (Cloth), with Strings, price 2s. each.

THE EIGHTY-NINTH VOLUME of "The Builder" (bound), price Twelve Shillings and Sixpence.

SUBSCRIBERS' VOLUMES, on being sent to the Office, will be bound at a cost of 3s. 6d. each.

CHARGES FOR ADVERTISEMENTS.

COMPETITIONS, CONTRACTS, ALL NOTICES ISSUED BY CORPORATE BODIES, COUNTY AND OTHER COUNCILS, PROSPECTUSES OF PUBLIC COMPANIES, SALES BY TENDER, LEGAL ANNOUNCEMENTS, etc., etc.

Six lines or under	2s. 6d.
Each additional line	1s. 0d.

SITUATIONS VACANT, PARTNERSHIPS, APPRENTICESHIPS, TRADE AND GENERAL ADVERTISEMENTS.

Six lines (about fifty words) or under	4s. 6d.
Each additional line (about ten words)	2s. 6d.

Terms for series of Trade advertisements, and for front page and other special positions, on application to the Publisher.

SITUATIONS WANTED (Single-handed—Labour only).

Four lines (about thirty words) or under	2s. 6d.
Each additional line (about ten words)	0s. 6d.

PREPAYMENT IS ABSOLUTELY NECESSARY.

*** Stamps must not be sent, but all sums should be remitted by Postal Orders, payable to J. MORGAN, and addressed to the Publisher of "THE BUILDER," Catherine Street, W.C.

Advertisements for the current week's issue are received up to THREE o'clock p.m. on THURSDAY, but "Classification" is impossible in the case of any which may reach the Office after HALF-PAST ONE p.m. on that day. Those intended for the Outside Wrapper should be in by TWELVE NOON on WEDNESDAY.

ALTERATIONS IN STANDING ADVERTISEMENTS, or ORDERS TO DISCONTINUE same must reach the Office before TEN o'clock on WEDNESDAY MORNING.

The Publisher cannot be responsible for DRAWINGS, TESTIMONIALS, etc., left at the Office in reply to advertisements, and strongly recommends that of the latter COPIES ONLY should be sent.

ADVERTISERS in "THE BUILDER" may have Replies addressed to the Office, Catherine Street, Covent Garden, W.C., free of charge. Letters will be forwarded if addressed envelopes are sent, together with sufficient stamps to cover the postage. Unused stamps are returned to advertisers the week after publication.

N.B.—The Reply Boxes are not intended for trade lists, circulars, and the like; should these be received, they cannot (if noticed) be forwarded.

AN EDITION Printed on THIN PAPER, for FOREIGN and COLONIAL CIRCULATION, is issued every week.

READING CASES { NINEPENCE EACH. By post (carefully packed) 1s

List of Contracts, etc.

COMPETITIONS.

Nature of Work.	By whom Required.	Premiums.	Designs to be delivered
*DESIGNS FOR FREE PUBLIC LIBRARY	Swadlincote U.D.C.	25*l.*, 15*l.*, 10*l.*	Mar. 24
*DESIGNS FOR COLLEGE BUILDINGS	University College of N. Wales	Not stated	No date.

CONTRACTS.

(For some Contracts still open, but not included in this List, see previous issues.)

Nature of Work or Materials.	By whom Advertised.	Forms of Tender, etc., supplied by	Tenders to be delivered
Work in Connexion with Drainage, Workhouse, Withington	Chorlton Guardians	C. Clegg & Sons, Architects, 21, Spring-gardens, Manchester	Feb. 6
Street Works (for one year)	Cardiff Corporation	W. Harpur, City Engineer, Town Hall, Cardiff	do.
Stone for Highway Repairs	do.	do.	do.
Stores	do.	do.	do.
Paints and Glass	do.	do.	do.
Portland Cement	do.	do.	do.
Improvement of Ventilation, Arthur's-hill School	Newcastle-on-T. Educ. Com.	A. Goddard, Educa. Offices, Northumberland-rd., Newcastle	do.
500 Tons of Macadam	Aldershot U.D.C.	F. C. Uren, Surveyor, Municipal-building, Aldershot	do.
140 lineal yds. of Stone Wall, Abbey-street	Bangor U.D.C.	J. Milliken, Town Hall, Bangor	do.
Painting Two Chapels and Lodge at Cemetery	Wortley Burial Board	E. Kirk, Cemetery Lodge, Wortley, Leeds	Feb. 7
Stores and Materials	Birkenhead Corporation	C. Brownridge, Borough Engr. & Sur., Town Hall, Birkenhead	do.
Coal Stage at Hartlepool	N.E. Railway Co.	W. Bell, Architect, Central Station, Newcastle-on-Tyne	do.
Stables and Bullock-houses	Buckfastleigh Co-oper. Society	A. Warren, Architect, Fore-street, Buckfastleigh	do.
High Pressure Steam Disinfector, Croydon-road	Penge U.D.C.	Surveyor, Town Hall, Anerley, S.E.	do.
Steel Bull-headed Rails and Fish Plates	East India Railway Co.	C. W. Young, Sec., Nicholas-lane, London, E.C.	do.
40 Fathoms of Yellow Deal, etc.	Woolwich Guardians	T. Cutler, Clerk, Union Offices, Woolwich	do.
400 tons of Cornish Basalt or Penmaenmawr Spalls	Gravesend, etc., Guardians	W. J. King, Clerk, Town Hall, Gravesend	do.
Paving and Flagging Streets	Leeds Corporation	City Engineer's Office, Municipal-buildings, Leeds	Feb. 8
Stoneware Pipe Sewers at Trealaw, Penygraig, etc.	Rhondda U.D.C.	Surveyor's Office, Council Offices, Pentre, Rhondda	do.
Taking Down and Rebuilding Chapel, Ton, Pentre		T. A. Thomas, Ton Foundry, Rhondda Valley	do.
Girder Bridges	Assam-Bengal Railway Co.	F. A. Lyall, Sec., 56, Bishopsgate-street Within, London, E.C.	do.
Chapel and Schools, Shearbridge-road, Bradford	Trustees late Mannville Chapel	E. H. Parkinson, Architect, Queensgate-chambers, Bradford	do.
*MAKING NEW ROAD, ISLINGTON	Trustees R. Cloudesley's Char.	Horace Porter, Surveyor, 16, Russell-square, W.C.	do.
*ROADMAKING, ETC., WORKS	Kingston-on-Thames Corptn.	Borough Surveyor, Municipal Offices, Kingston-on-Thames	Feb. 9
Bolton Council School	Warrington Education Com.	J. E. Wright, Garnett, & Wright, 45, Sankey-st., Warrington	do.
Granite and Slag	East Retford R.D.C.	T. Henry, Surveyor, Retford	Feb. 10
3,500 sq. yds. of Tar Paving	Teddington U.D.C.	M. Hamsworth, Surveyor, Elmfield House, Teddington	do.
Granite	Blything Guardians	H. A. Mullens, Clerk, Bulcamp, Halesworth	Feb. 12
2,000 cubic yds. of Heavy Retaining Walls, Gyfellion	Pontypridd U.D.C.	P. R. A. Willoughby, Engineer, Council Offices, Pontypridd	do.
260 cubic yds. of Heavy Retaining Wall, etc.	do.	do.	do.
House Drainage Work (twelve months)	Manchester Corporation	H. Prescott, Manager House Drainage Depart., Manchester	do.
Ventilating Grids and other Castings	do.	do.	do.
1,200 tons of Broken Granite	Downham R.D.C.	H. Wayman, Clerk, Union Offices, Downham Market	do.
2,000 yds. of Broken Gravel	do.	do.	do.
Team Labour	do.	do.	do.
Stores	Salford Tramways Committee	General Manager, 32, Blackfriars-street, Salford	do.
Improvements in South-street and Tay-street	Perth Town Council	R. M'Killop, Borough Surveyor, 12, Tay-street, Perth	do.
Elm-grove Mixed School, Wellington-street	Brighton Education Com.	T. Simpson & Son, Architects, 16 and 17, Ship-st., Brighton	do.
Furniture for Public Offices	Pontypridd U.D.C.	P. R. A. Willoughby, Engineer, Council Offices, Pontypridd	do
Steam Generator	Dover Corporation	L. W. Woodman, Borough Electrical Engineer, Dover	do.
Hardwood Paving Blocks	Blackpool Highway Com.	J. S. Brodie, Borough Surveyor, Town Hall, Blackpool	do.
*WORKS AND MATERIALS	St. Pancras Borough Council	Borough Engineer, Town Hall, Pancras-road, N.W.	do.
*ANNUAL CONTRACTS	Hendon U.D.C.	Council's Sur., Council's Office, The Burroughs, Hendon, N.W.	do.
Taking Down and Rebuilding Boreland Bridge, Hutton	Lockerbie District Committee	Mr. Paterson, Road Surveyor, Beattock	Feb. 13
Widening Reedyford (Hundred) Bridge	Main Roads and Bridges Com.	W. C. Hall, County Bridgemaster, Preston	do.
Widening Reedyford South (County) Bridge	do.	do.	do.
Rebuilding Peppermint (County) Bridge, Butterworth	do.	do.	do.
Road Repairs, West-lane, Baildon	Baildon U.D.C.	T. Waddingham, Surveyor, Westgate, Baildon	do.
Granite and Slag	Potterspury R.D.C.	J. B. Fairchild, Surveyor, Potterspury, Stony Stratford	do.
275 tons of Steel Bridge Girders, etc.	Great Western Railway Co.	Engineer, Paddington Station, London	do.
Inclined Retort Benches	Stockport Gas Committee	S. Mennier, Engineer, Portwood Gasworks, Stockport	Feb. 14
Highway Materials and Stoneware Pipes	Bexley U.D.C.	W. T. Howse, Surveyor, Council Offices, Bexley Heath	do.
Sanitary Annexes and Mortuary in Workhouse	North Dublin Guardians	J. O'Neill, Clerk, North Brunswick-street, Dublin	do.
Six Iron External Emergency Staircases	do.	do.	do.
Granite, Flints, Pipes, etc.	Bexley U.D.C.	W. T. Howse, Surveyor, Bexley Heath, Kent	do.
Stores, etc.	Battersea Borough Council	W. M. Wilkins, Town Clerk, Battersea	do.
School at Froxfield	Wilts County Council	C. S. Adye, Surveyor, County Offices, Trowbridge	do.
Alterations, etc., to School Buildings, Broomhall	Sub-committee for Nantwich	H. Beswick, County Architect, Newgate-street, Chester	do.
Street Works, Sussex-road, Chapeltown	Wortley R.D.C.	G. E. Beaumont, Surveyor, Grenoside, Sheffield	do.
*LICENCES TO WORK SIX STEAM DREDGERS	Thames Conservancy	Thames Conservancy Office, Victoria Embankment, E.C.	do.
Lift at Workhouse Infirmary, Stow Hill	Newport Guardians	Master of Workhouse, Stow Hill, Newport, Mon.	Feb. 15
Road Material, Stores, etc.	Woolwich Borough Council	J. Rush Dixon, Borough Engineer, Town Hall, Woolwich	do.
Sewerage Works, Duffield	Belper R.D.C.	S. R. Lowsock & Phelps, Engineers, 50, Queen Anne's-gate	do.
Additions to School, West Halton, near Frodingham	Lindsey C.C. Education Com.	Scorer & Gamble, Architects, Bank-street-chambers, Lincoln	do.
Granite	East Retford Borough Council	G. D. Kennedy, Borough Surveyor	do.
Lime	Wolverhampton Sewer. Com.	W. Clifford, Sewage Works, Wolverhampton	do.
Granite	Lutterworth R.D.C.	A. J. Ross, District Surveyor, Lutterworth	do.
Rebuilding House and Shop, High-street, Buntingford	Trustees Buntingford Charities	W. D. Caröe, Architect, 8a, Whitehall-place, S.W.	do.
Small-pox Hospital, etc., at Belle Vue	Carlisle Corporation	H. C. Marks, City Engineer, 36, Fisher-street, Carlisle	do.
Alterations and Additions to Ystrad Mynach Parish Church	Rev. H. Thomas	E. M. Bruce Vaughan, F.R.I.B.A., Cardiff	do.
Three Pairs of Attendants' Cottages, Asy. Est., near Charminster	Visiting Com. Dorset Co. Asy.	W. J. Fletcher, F.R.I.B.A., Wimborne	do.
Small Covered Service Reservoir, Ingatestone	Chelmsford R.D.C.	J. Dewhirst, Engineer, Market-road, Chelmsford	Feb. 16
Road Material	Horncastle R.D.C.	J. E. Chatterton, Council Offices, Horncastle	do.
*CONVENIENCES FOR CHILDREN, SOUTHWARK PARK	London County Council	Architect's Department, 15, Pall Mall East, S.W.	do.
Hartshill Stone	Banbury Town Council	N. H. Dawson, Borough Surveyor, Town Hall, Banbury	Feb. 17
*WORKS AND MATERIALS	Stepney Borough Council	Borough Engineer, 15, Great Alie-street, Whitechapel, E.	do.
Paving, Flagging, etc.	Bradford Corporation	City Surveyor's Office, Town Hall, Bradford	Feb. 19
Materials, etc.	Richmond (Surrey) Town Coun.	J. H. Brierley, Borough Surveyor, Town Hall, Richmond	do.
Painting, etc., Interior of Infirmary Annexe, Macclesfield	Committee of Visitors	Clerk of Asylum, Parkside Asylum, Macclesfield	do.
District Roads Repair	Cerne R.D.C.	A. E. A. Cole, Clerk, Cerne Abbas	do.
*ADDITIONS, ETC., TO SCHOOL, ST. ALBANS	Herts County Council	County Surveyor, Hatfield	do.
*ENLARGEMENT OF WORCESTER HEAD POST-OFFICE	Comms. of H.M. Works, etc.	H.M. Office of Works, Storey's Gate, S.W.	Feb. 20
Reservoir in Cwm Dimbath, near Blackmill	Garw Water Co.	T. Rees, Engineer, Corn Exchange-chambers, Newport, Mon.	Feb. 21
Insitu Concrete to Footways and Back Streets	South Shields Corporation	S. E. Burgess, Borough Eng., Chapter-row, South Shields	do.
4,300 yds. of Flints	Chorley R.D.C.	C. Patrick, Clerk, Union Offices, West-street, Lewes	do.
1,030 yds. of Quartzite, Kentish Rag, Mendip Stone	do.	do.	do.
24,000 Tons of Granite	Bucks Highways Committee	R. J. Thomas, County Surveyor, Aylesbury	do.
Painting, Glazing, etc., Dublin	Board of Public Works	H. Williams, Secretary, Office of Public Works, Dublin	Feb. 22
One 800 Kilowatt Horizontal Steam Turbo-alternator	Shanghai Municipal Council	Preece & Cardew, 8, Queen Anne's Gate, Westminster, S.W.	do.
Holmer School for 200 Infants	Hereford Education Authority	J. Parker, City Surveyor, Town Hall, Hereford	Feb. 26
Making-up Roads	Southall-Norwood U.D.C.	R. Brown, Engineer, Public Offices, Southall	Feb. 27

CONTRACTS.—*Continued.*

Nature of Work or Materials.	By whom Advertised.	Forms of Tender, etc., supplied by	Tenders to be delivered
760 lineal yds. of Road, etc., Hillside Park Estate, Woolton	.....	P. Davies, 8, Cook-street, Liverpool	No date.
Additions to and Reconstruction of Church	Carryduff Presbyterian Church	N. Fitzsimons, Architect, 13, Lombard-street, Belfast.....	do.
Additions to Works near Lynn	.....	W. Jarvis & Son, Paradise-parade, Lynn	do.
Electric Lighting of Offices, Yards, etc., at Wood Quay	Dublin Corporation	City Electrical Engineer, Fleet-street, Dublin	do.
*EXTENSIONS AT CHEDDLETON ASYLUM	Staffs. County Council	Giles, Gough, & Trollope, 28, Craven-st., Charing Cross, W.C.	do.
*NEW GRAMMAR SCHOOL BUILDINGS, BRENTWOOD	The Governors	Chancellor & Son, Architects, Chelmsford	do.
*INFANTS' SCHOOL AT GLYNNE.....	Staffs. C.C. Education Com.	G. Balfour, Director of Education, Stafford	do.
*HIGH SCHOOL FOR GIRLS, CHELMSFORD	Essex Education Committee..	F. Wykeham Chancellor, Architect, Chelmsford	do.
*SUPERSTRUCTURE OF NEW COLLEGE BLDGS., CARDIFF	Univ. Coll. of South Wales, etc.	The Registrar, University College, Cardiff	do.

PUBLIC APPOINTMENT.

Nature of Appointment.	By whom Advertised.	Salary.	Applications to be in
*DIRECTOR OF INDUSTRIAL ARTS CLASSES	Glasgow, etc., Technical Coll.	120*l.* per annum	Feb. 23

AUCTION SALES.

Nature and Place of Sale.	By whom Offered.	Date of Sale.
*DEALS, BATTENS, ETC.—Great Hall, Winchester House, Old Broad-street, E.C.	Churchill & Sim	Feb. 7
*MACHINERY, BUILDER'S STOCK AND PLANT—Bridge House Works, East Molesey	Humber & Flint	Feb. 7, etc.
*STOCK OF TIMBER MERCHANT—391, Battersea Park-road, S.W.	Harold Griffin	do.
*FREEHOLD BUILDING SITE, WHITECHAPEL—At the Mart	C. C. & T. Moore.....	Feb. 8
*TIMBER AND MATERIALS—R.Ag.S.E., Show Ground, Park Royal, Willesden, London	Joshua Baker, Cooke, & Standen	Feb. 8, etc.
*FREEHOLD PROPERTY, CITY OF LONDON—At the Mart	David Burnett & Co.	Feb. 21
*CONTRACTOR'S PLANT AND MACHINERY—At Sunbury-road, Hanworth, Middlesex	Fuller, Horsey, Sons, & Cassell.....	Feb. 22, etc.
*BUILDING SITE, HAYMARKET, S.W.....	May & Rowden	Mar. 29

* *Those with an asterisk are advertised in this number*: *Competitions* iv.; *Contracts*, iv. vi. viii. x.; *Public Appointments*, xix.; *Auction Sales*, xxxii.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach us *not later than* 10 *a.m. on Thursdays*. [N.B.—We cannot publish Tenders unless authenticated either by the architect or the building-owner; and we cannot publish announcements of Tenders accepted unless the amount of the Tender is stated, nor any list in which the lowest Tender is under 100*l.*, unless in some exceptional cases and for special reasons.]

* Denotes *accepted*. † Denotes *provisionally accepted*.

ANNFIELD PLAIN.—For erecting cart shed, oil house, stable, loose box, etc., at Langley Park branch, for the Co-operative Society. Mr. G. T. Wilson, architect, 22, Durham-road, Blackhill, Co. Durham:—

E. Lodge	£857 0	W. Foster, Langley Park*	£604 3
J. Robson	725 0		
E. Rutter & Sons..	708 0		

BECKENHAM.—For erecting a school for defective children, with cookery classroom, at the Arthur-road School, for the Urban District Council. Mr. John A. Angell, Surveyor, Beckenham:—

Wright & Hurst.....	£2,257 2 1	B. E. Nightingale	£1,990 0 0
Emness Bros.	2,193 0 0	W. F. Blay ..	1,985 0 0
Hall & Jacobs	2,152 8 9	F. Jacob	1,959 0 0
H. Heathfield	2,079 0 0	Jones & Andrews ..	1,956 0 0
J. & C. Bowyer	2,047 0 0	J. Lonsdale ..	1,920 0 0
Wallis & Sons, Ltd.	2,043 0 0	Myall & Upson	1,853 0 0
F. W. Green..	1,994 16 0	F. & G. Foster, Norwood Junction* ..	1,744 0 0
J. Smith & Sons, Ltd..	1,993 0 0		

CARDIFF.—For erecting new Sunday schoolroom, Fitzhamon-embankment, for Rev. H. A. Coe. Mr. A. Grove, architect, 15, Clifford's-inn, London:—

G. Beames	£1,175 0	T. Pearce.....	£949 0
Melhuish Bros...	1,097 0	W. Thomas & Co.	940 0
J. S. Shepton ..	1,043 10	S. Shepton & Son, Cardiff*	898 10
G. Hallett.....	1,020 0	E. T. Bevan‡	897 0
J. Gibson.....	980 0		
D. Davies & Sons	950 0		

‡ Certain work was omitted in this tender.

FOLKESTONE.—For constructing a shelter, with ladies' and gentlemen's convenience in the Marine Gardens, for the Corporation. Mr. A. E. Nichols, Borough Engineer, Corporation Offices, Folkestone:—

S. T. Bintield* £1,279

FOREST HILL.—For new sorting-office:—

Wright & Hurst	£3,462 0	Martin, Wells, & Co., Ltd.	£2,750 0
A. W. Coombs..	3,339 18	C. Ansell	2,727 0
F. W. Green....	3,300 0	J. & W. Drake..	2,726 0
T. R. Roberts & Co.	3,228 0	B. E. Nightingale	2,708 0
A. Black & Son	3,119 0	B. Colby & Sons	2,695 0
W. Mills	2,995 0	E. Streather	2,691 0
J. Garrett & Son	2,942 0	Galbraith Bros.	2,650 0
H. Loney & Son	2,940 0	Edwards & Medway	2,649 0
J. D. Ling'	2,939 0	W. H. Hyde!....	2,618 10
J. E. Saunders..	2,900 0	G. E. Everitt ..	2,568 0
H. Groves.....	2,774 0	W. Taylor & Co.	2,547 0
J. Shelbourne & Co.	2,766 0	F. & G. Foster..	2,498 0
J. & C. Bowyer	2,758 0	J. Barker & Co., Ltd.*	2,474 0
Grace & Marsh..	2,739 0		

FORDOUN (Scotland).—For erecting hall and janitor's house at Fordoun public school. Mr. G. Gregory, architect, Stonehaven:—

Masonry: J. Murray, Stonehaven.....
Carpentry: A. Hendry, Auchenblae.....
Slating: J. Lindsay & Son, Montrose .... } £744 12 6
Plumbing: R. & W. Peter, Bervie .....
Plastering: A. Clark, Bervie .....

GOSPORT.—For bathrooms and hot-water works at Workhouse, Park-road, for Alverstoke Guardians. Mr. H. A. F. Smith, architect and surveyor, Star-chambers, Gosport. Quantities by architect:—

C. Wright	£461 0 0	C. M. Dash ..	£369 0 0
Southey, Ltd..	398 0 0	Lane Bros. ..	365 0 0
R. W. Lowe ..	397 0 0	McCarthy Bros.	340 0 0
J. Hunt.....	390 16 10	C. J. Lear & Son, Alverstoke, Gosport* ..	327 0 0
R. M. Middleton & Co. ..	380 0 0		

GRIMSBY.—For erecting a house on the Scartho-road. Mr. E. Goodhand, architect, Osborne-chambers, Grimsby:—

R. G. Kitching.....	£520	A. Atkinson	£425
J. H. Thompson & Sons	486	J. C. Allison, Waltham*	396
G. & J. Smith	478		

KEHELLAND (Cornwall).—For erecting a Sunday Schoolroom, etc., at Kehelland, Camborne. Mr. Edwin H. Crispin, architect, Treiawny-road, Camborne:—

	School.	Re-seating.
Ford & Son, masons.....	£260	—
S. Richards, carpenter.....	—	£346
J. Berryman	350	200
Ireland & Jory.....	320	220
W. Richards*	265	190

LONDON.—For making-up, etc., roadway in front of Nos. 1 to 11, Carlton-gardens, Carlton House Estate, Herne Hill, S.E. Mr. H. R. G. S. Smallman, architect, 8, Queen-street, Cheapside, E.C.:—

Hodman	£609 18 2	C. W. Killingback & Co. ..	£377 0 0
J. Trueman	538 0 0	Hirst & Co.....	375 0 0
S. Kavanagh & Co.....	497 0 0	Streeter & Co....	373 0 0
T. Robinson....	479 1 0	W. H. Wheeler	367 0 0
W. Neave & Son	468 0 0	Hewett & Sons	360 0 0
J. Shelbourne & Co.....	405 0 0	J. Jackson	323 0 0
H. Woodham & Sons	393 0 0	W. Sheppard, Ltd., Prior Park-road, Bath*	310 0 0
E. Iles, Sen.....	377 0 0	A. L. Soan‡	290 0 0

‡ Withdrawn.

LONDON.—For the construction of additional staging at Belgrave Wharf, Westminster, for the Westminster City Council:—

T. Coulthard	£214 0	J. R. Sims	£194 10
Wright & Son....	194 15	H. & E. Lea	175 10
Love & Co.	188 10	T. W. Haylock* ..	142 0

LONDON.—For means of escape in case of fire at the Upton House Truant school, Hackney, S., and the erection of a manual training room for sixteen boys, for the London County Council:—

E. Lawrence & Sons	£845	G. S. S. Williams & Son	£773
L. H. & R. Roberts..	844	W. Shurmur & Sons, Ltd.	747
W. Lawrence & Son..	824	Stevens Bros., 1A, Yonge-park, Seven Sisters-road*	733
C. R. Price	815		
J. Stewart.....	786		
J. Grover & Son	777		

LONDON.—For the construction of workmen's dwellings on the site of Nos. 20, 21, 22, and 23, Marshall-street, Westminster, for the Westminster City Council:—

Sabey & Son, Ltd.* £3,700
Plastering.
J. Bickley* £549

LONDON.—For constructing an iron and slate roof over part of the yard at the Destructor Depot, Georgiana-street, Camden Town, for St. Pancras Borough Council. Mr. W. N. Blair, Borough Engineer and Surveyor:—
W. Taylor & Co., Lower Mall, Hammersmith, W.* £471

LONDON.—For erection of new Wesleyan East-end Mission Centre, Commercial-road, Stepney, E. Messrs. Weir, Burrows, & Weir, architects and surveyors, 17, Victoria-street, Westminster:—

	Portland Stone.		Shop Fronts.	
T. Rider & Son	£35,056	....	£512	.... £557
G. Trollop & Sons and Colls & Sons, Ltd.	33,100	....	580	 500
F. G. Minter	32,987	....	675	 437
J. Carmichael.....	32,648	....	566	 490
W. Johnson & Co...	32,398	....	390	 485
G. Parker	31,387	....	462	 465

LONDON.—For road-making, etc., Adley-street, for Hackney Borough Council. Mr. N. Scorgie, Borough Engineer and Surveyor, Town Hall, Hackney:—

A. T. Catley	£278 0 0
Grounds & Newton	267 12 0
W. Griffiths & Co., Ltd.	267 6 4
G. Porter, 2, Arthur-street, Well-street, Hackney, N.E.*	261 15 7

LONDON.—For repaving the yard at the Clerkenwell fire-station, for the London County Council:—

C. W. Killingback & Co.	£210 16 0
J. Mowlem & Co., Ltd.	207 0 0
G. Wimpey & Co.	168 0 0
J. A. Ewart	162 0 0
W. Griffiths & Co., Ltd., 35-9, Hamilton House, Bishopsgate-st. Without, E.C.*	154 15 9

[Architect's estimate was £198, at which sum the Works Committee refused the work.]

LONDON.—For the supply and delivery of an overhead traveller required at Falcon Brook pumping-station, for the London County Council:—

J. M. Henderson & Co.	£330 0
T. Smith & Sons, Rodley, near Leeds*..	300 0
J. Booth & Bros., Ltd.	257 10

LONDON.—For the execution of the roadwork and platelaying in connexion with the construction for the underground conduit system of electrical traction of the authorised tramways from Camberwell-green, *viâ* Denmark-hill, Champion-park, Grove-lane, Dog Kennel-hill, Grove-vale, and Lordship-lane, to the junction of Lordship-lane and Crystal Palace-road, for the London County Council:—

W. Griffiths & Co., Ltd.	£92,894 14 5
J. G. White & Co., Ltd.	92,460 2 4
Muirhead, Greig, & Matthews....	89,992 10 10
Dick, Kerr, & Co., Ltd.	89,063 3 3
J. Mowlem & Co., Ltd.....	86,548 0 0
A. Krauss & Son	84,078 7 0
R. W. Blackwell & Co., Ltd., London*	82,620 11 11

[The engineer's estimate of the cost of the work comparable with the above tenders is £88,100 0s. 11d.]

MERTON.—For constructing roads and sewers on the Merton Abbey Estate. Mr. H. R. G. S. Smallman, architect, 8, Queen-street, Cheapside, E.C.:—

—	Roads and Sewers.	Old Materials.	Net Total.
	£ s. d.	£ s. d.	£ s. d.
Wallace & Inns	2,999 0 0	—	2,999 0 0
Hewett & Sons	2,800 0 0	200 0 0	2,600 0 0
W. A. Sheppard, Ltd.	2,767 10 0	183 4 0	2,584 6 0
Peerless, Dennis, & Co.	2,540 0 0	—	2,540 0 0
C. W. Killingback & Co.	2,515 0 0	—	2,515 0 0
Lane	2,500 0 0	150 0 0	2,650 0 0
W. Neave & Son	2,162 0 0	100 0 0	2,062 0 0
Hirst & Co.	2,100 0 0	50 0 0	2,050 0 0
I. Dean & Co.	2,075 0 0	75 0 0	2,000 0 0
King	1,979 0 0	50 0 0	1,929 0 0
H. Woodham & Sons	2,120 0 0	220 0 0	1,900 0 0
J. Trueman	1,932 0 0	60 0 0	1,892 0 0
S. Kavannagh & Co.	1,977 0 0	100 0 0	1,877 0 0
J. May	2,150 0 0	400 0 0	1,750 0 0
J. Jackson	1,963 0 0	300 0 0	1,663 0 0
Hoffmann	1,694 1 9	50 0 0	1,644 1 9
Cunningham & Co.	1,851 7 11	330 0 0	1,521 7 11
A. Streeter & Co.	1,642 19 7	182 8 0	1,460 11 7
E. Parry & Co.	1,695 0 0	250 0 0	1,445 0 0
O. T. Gibbons, Leytonstone*	1,549 0 0	250 0 0	1,299 0 0
Macdonald‡	992 0 0	—	992 0 0

‡ Withdrawn.

NEWCASTLE-UPON-TYNE.—For new pavilions, nurses' home, etc., at City Hospital for Infectious Diseases, Walker-gate, for the Sanitary Committee. Mr. F. H. Holford, City Architect, Town Hall, Newcastle-upon-Tyne. Quantities by Mr. J. Parnell Allen, 21, Grainger-street West, Newcastle-on-Tyne:—

W. Hall	£46,382 0 0
Glen & Moffett	45,987 19 6
W. Ross	45,548 0 0
W. W. Franklin & Sons	45,522 6 9
H. & G. Brown, The North Durham Stone Co.	45,399 0 0
F. B. White	45,382 1 0
Middlemiss Bros.	45,234 17 6
E. R. Davidson	45,130 17 4
W. Worley, jun.	44,421 17 0
J. Howe & Co.	44,250 0 0
Isaac Bewley	44,200 0 0
T. Weatheritt	44,176 4 11
J. C. Hope	44,100 10 6
J. Milne	43,996 2 8
J. & W. Lowry	43,890 0 0
T. Hunter	43,863 0 0
J. White	43,787 0 0
Nicholls, Telford, & Co.	43,413 0 3
T. Lumsden	43,200 0 0
J. & G. Douglass	42,973 16 1
J. F. Dixon	42,932 7 9
G. H. Mauchlen	42,886 12 6
J. W. White	42,822 0 0
S. Easten	42,759 0 0
R. Blackett & Sons	42,600 0 0
W. Foster	42,513 0 0
R. Neill & Sons	42,500 0 0
H. & S. Watson	41,998 7 4
Kirk & Brown	41,868 16 9
E. T. George	41,800 0 0
J. & W. Simpson	41,750 0 0
W. T. Weir	41,000 0 0
S. Sheriff & Sons	40,877 14 11
S. F. Davidson	40,700 0 0
J. L. Miller	40,658 9 10
W. Nicholson	40,220 10 2
J. Parkinson & Sons, Breamish-street, N.C.*	39,720 0 0
H. Arnold & Sons	39,450 0 0

PRESTON.—For levelling, paving, flagging, channelling, etc., Lincoln-street from Baring-street to Peel Hall-street, for the Corporation. Mr. Thomas Cookson, Borough Surveyor, Preston. Quantities by Borough Surveyor:—

J. Moxham & Sons, Preston £597 6

PRESTON (Lancs).—For erecting a public elementary school in Roebuck-street, for the Corporation. Mr. Herbert Howarth, architect, Morecombe. Quantities by architect:—

T. Cottam, Preston £6,350

RIVER.—For erecting an infants' school at Commonlane, for the Dover Town Council. Mr. H. E. Stilgoe, M.Inst.C.E., Maison Dieu House, Biggin-street, Dover:—

J. S. Ovenden	£1,904	7	11
R. & G. Brieley	1,900	0	0
W. S. Long	1,880	13	4
Hayward & Paramor	1,839	0	0
J. Morgan	£1,747	9	6
G. Lewis & Sons	1,688	0	0
W. H. Grigg	1,644	0	0
G. Munro*	1,614	0	0

[All of Dover.]

SACRISTON (Co. Durham).—For erecting new Primitive Methodist schools. Messrs. Davidson & Phillipson, architects, Pearl-buildings, Newcastle-on-Tyne:—

M. R. Draper & Son	£1,405	0	0
T. Dorin	1,376	0	0
E. Dyson	1,375	10	9
F. J. Knaggs & Sons	1,367	19	2
H. C. Howe	1,361	7	3
J. B. Stott	1,314	0	0
W. Lodge	1,300	0	0
R. Thompson	£1,204	10	7
H. Smith	1,280	6	2
I. Oates	1,277	0	0
Craig Bros.	1,272	3	0
W. Bradley	1,251	10	0
J. Stobbs	1,250	0	0
B. Bolam, Birtley, R.S.O.*	1,221	15	11

SHELF.—For the construction of about 4,800 lineal yds. of 12-in., 9-in., and 6-in. earthenware pipe sewers, with the necessary manholes, lampholes, ventilators, flushing valves, and storm overflows connected therewith; also for the receiving, sedimentation, and sand tanks, percolating and storm filters, sludge areas, storehouse, road to works, boundary walls, etc., for the Urban District Council. Messrs. J. Drake & Son, engineers, Queensbury, near Bradford:—

F. Robinson & Son, Thornton, Bradford* £3,516 10

[There were over forty tenders.]

SHEPLEY.—For sewerage works at Shepley, near Huddersfield, for the Urban District Council. Mr. T. Aird Murray, C.E., Independent-buildings, Sheffield:—

Edmondson & Wyatt, Werneth, Oldham* £2,750

SWINDON.—For New County Court:—

J. Long & Sons	£6,800	0	
Stephens, Bastow, & Co., Ltd.	6,642	0	
Hayward & Wooster	6,487	0	
D. Davies & Sons	6,440	0	
R. Wilkins & Sons	6,165	0	
G. Moore	6,028	0	
H. Flint	£5,967	0	
H. & C. Spackman	5,885	0	
W. Jones	5,880	0	
G. H. Gibson	5,298	0	
A. J. Colborne	5,199	10	
J. G. Norman, 62, Victoria-rd., Swindon*	5,084	0	

WOODHALL SPA (Lincs.).—For constructing a sewer in Spa-road, for the Urban District Council. Mr. E. E. T. Bolton, Surveyor, Woodhall Spa:—

C. Kirk	£467	11	0
J. Walling	323	17	9
Cannam Bros.	310	8	10
J. M. Harrison	267	10	4
H. H. Barry	£240	13	6
F. Steadman	235	15	0
B. Crooker, Woodhall Spa*	221	15	0

[Surveyor's estimate, £254 5s.]

W. H. Lascelles & Co.
LIMITED,
121, BUNHILL ROW, LONDON, E.C.
Telephone No. 1365 London Wall.
HIGH-CLASS JOINERY,
LASCELLES' CONCRETE.
Architects' Designs are carried out with the greatest care.
CONSERVATORIES,
GREENHOUSES,
WOODEN BUILDINGS,
Bank, Office, and Shop Fittings.
CHURCH BENCHES & PULPITS.
ESTIMATES GIVEN ON APPLICATION.

The BATH STONE FIRMS, Ltd., BATH.
For all the Proved Kinds of
BATH STONE.
FLUATE, for Hardening, Waterproofing, and Preserving Building Materials.

HAM HILL STONE.
DOULTING STONE.
The Ham Hill and Doulting Stone Co., Limited (incorporating the Ham Hill Stone Co. and C. Trask and Son, The Doulting Stone Co.).
Chief Office:—Norton, Stoke-under-Ham, Somerset.
London Agent:—Mr. E. A. Williams, 16, Craven-street, Strand.

GREEK MARBLE.
White and Blue Pentelikon at Low Prices for BUILDING PURPOSES.
Beautiful Colours for Interior Decoration.
Full Particulars and Samples:—
MARMOR LIMITED,
18, Finsbury-square, E.C.
See Advt. p. xxiii

Asphalte.—The Seyssel and Metallic Lava Asphalte Company (Mr. H. Glenn), Office, 42, Poultry, E.C.—The best and cheapest materials for damp courses, railway arches, warehouse floors, flat roofs, stables, cow-sheds and milk-rooms, granaries, tun-rooms, and terraces. Asphalte Contractors to the Forth Bridge Co.

SPRAGUE & CO.'S, Ltd.,
"INK-PHOTO" PROCESS,
4 & 5, East Harding-street,
Fetter-lane, E.C.

QUANTITIES, etc., LITHOGRAPHED accurately and with despatch. [Telephone No. 434 Westminster.
METCHIM & SON {8, PRINCES STREET, S.W., and 23, CLEMENT'S LANE, E.C.
"QUANTITY SURVEYORS' DIARY & TABLES," For 1906, price 6d., post 7d. In leather, 1/-, post 1/1.

JOINERY
Of every description and in any kind of Wood.
CHAS. E. ORFEUR, LTD.,
ESTIMATES ON APPLICATION.
COLNE BANK WORKS,
COLCHESTER.
Telephone: 0126. Telegrams: "Orfeur, Colchester."
LONDON OFFICE: 161, COMMERCIAL STREET, E

PILKINGTON & CO
(ESTABLISHED 1838.)
MONUMENT CHAMBERS,
KING WILLIAM STREET, LONDON, E.C.
Telephone No., 6319 Avenue.
Registered Trade Mark.
Polonceau Asphalte.
PATENT ASPHALTE and FELT ROOFING.
ACID-RESISTING ASPHALTE.
WHITE SILICA PAVING.
PYRIMONT SEYSSEL ASPHALTE.

MOULE'S PATENT EARTH CLOSET COMPANY, LIMITED.
This Business, having been ESTABLISHED 40 YEARS, has all the experience that time and thought can give and ingenuity can devise in producing the
Most Perfect Earth Closet.
Where used there is no danger of typhoid fever. The Company has obtained
A NEW PATENT, 1905,
For further improvements, making its apparatuses
The Perfection of Earth Closets
Without increase of prices. They have been awarded Gold Medals and other Highest Prizes ever given for Earth Closets.
BEWARE OF INFERIOR AND UNRELIABLE IMITATIONS.
They are also especially suited for buildings and places below the level of drains and outfalls, and also where there is difficulty in obtaining a water supply. Testimonials of their value in these respects can be seen at the Company's Offices. They are well made and finished, in plain and in elegant woods, and can be fitted in any position inside or outside Mansions, Cottages, Schools, Hospitals, and Workshops. They are supplied to Camps, and for use on board ship. They have been supplied to Windsor Castle and Sandringham. Over twelve thousand have been supplied to Departments of H.M. Government. When they are required temporarily the Company will contract for lending a quantity, and will fix them if necessary.
On view at the Company's Address. Descriptive illustrated pamphlets and particulars sent post free.
MOULE'S PATENT EARTH CLOSET COMPANY, LTD., 5A, GARRICK STREET, LONDON, W.C.